THE

VETERINARY JOURNAL

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Editorials.

THE PROFESSION AND THE ARMY.

ONE of the vexed questions of the day, and one that is likely to cause a good deal of friction before it is settled, is the question of veterinary rank in the army. Our medical brethren have fought hard and long, and they have gained their point. In their case the truth of the adage "Union is strength" was made manifest, and we must follow their example if we are to retain any footing at all in the army.

As all our readers know, veterinary officers are not designated simply Major Blank or Captain Dash, but are made to feel the difference of caste by having the qualifying word "veterinary" placed before their title, so that our officers are known as Veterinary-Major Blank and Veterinary-Captain Dash, and this is further rendered superfluous, as it is already obnoxious, by the addition A.V.D. (Army Veterinary Department) which follows the title. Now, whilst we are all proud to call ourselves veterinarians, believing our function to be scarcely inferior to that of the medical staff, we have a lurking suspicion that the prefix is not meant to convey a distinction but a snub. The Medical Department had the same uncomfortable feeling, and they used all the means at their command and got the distinction abolished. As some confusion of thought has occurred in connection with this matter and sneers have been freely bandied about, we ask the attention of our readers whilst we discuss the various points of dispute. There ought really to be no dispute, as the question has been settled in principle for the medicals, but our readers may not have read the discussions and may not quite appreciate the logical subtleties of the case. Let it be noted, then, that departmental prefixes to titles of rank are, except with ourselves, confined to non-commissioned officers: thus we have Farrier-Sergeant-Major, Drum-Major, &c. &c. On the other hand, when the riding-master attains official rank, he is simply called captain.

It is no doubt right that there should be both classes of officers, but the distinction ought to start from the word "commission." We hold His Majesty's commission, and we ought to enjoy all the

privileges that other commissioned officers enjoy, whether combatant or non-combatant. To separate us even by a prefix is at once to arouse inquiry and breed suspicion. There is no dread of inquiry on our part, even of the most searching kind, but we disdain it as unnecessary and insulting; in short, we bear the royal mint mark, and we will not have our weight and quality discussed whilst other coin not a whit better passes unquestioned. Still less will we tolerate suspicion; it ought to be sufficient to know once and for all that no man is permitted to enter the King's service as an officer without due examination, and we will not have the King's authority questioned or his titles of honour subjected to malicious innuendo. We are therefore actuated by no spirit of vanity, selfishness, or avarice in claiming equal rights with our combatant and our medical brethren; we are simply giving proof of our loyalty and devotion to the Crown.

But our claim is no merely sentimental one; it is built on solid reason, and has a foundation of plain common sense. Army rank is not a simple matter of fine feathers and gold lace. The youngest lieutenant is a power in the military world when there is a question of discipline. Every private knows that he disobeys this fledgling officer at his peril. The order may be a foolish or a mistaken one, but it has to be obeyed; there is no hesitation, because there is no responsibility, whilst to disobey might entail a court-martial. In the same way the junior officer takes his orders unquestioningly from his senior, and the regimental officer from the field-officer, and so on, until a Lord Roberts or a Duke of Connaught is reached as an authority from which there is no appeal. In this unquestioning obedience lies the strength, the very safety, of an army. But introduce the element of uncertainty and all discipline vanishes, and with it the safety of the army. "If the trumpet give an uncertain sound, who shall prepare himself for battle?" We therefore maintain that in the interests of the British Army a captain must be a captain, whether combatant, medical, veterinary, or otherwise, and private soldiers must not be allowed to distinguish between the departments. Let us suppose that a veterinary officer requires and obtains a score of men to assist him in his ministrations to sick horses, disease having broken out or injuries to an abnormal extent having been inflicted. As regulations go at present the colonel may requisition those men at a moment's notice for inspection or parade, and the veterinary officer is left helpless and distracted. The colonel could not do this with his medical fellow-officer, without at least asking his permission. And why? Because the medical officer is simply Major Blank or Captain Dash, and has no depreciatory or circumscribing prefix. It must be apparent to the meanest understanding that an officer so impeded and harassed is to a great extent deprived of his power of initiative, and, therefore, of his usefulness. He can never tell when his plans will break down—that they may not break down at the

critical moment, and that what might have been a great success may turn out a huge and disastrous failure. Here, then, is a real and serious danger to the British Army, to remove which every possible effort must be made by military and civilian authorities alike. The warning note has already been sounded. The other night in the House of Commons Captain Norton asked the Secretary for War if he was aware that the veterinary profession was entirely dissatisfied with its relations to the army, and had determined to follow the lead of the medicals in refusing to send candidates for military appointments. Mr. Brodrick replied that he had heard of this discontent, but he did not indicate what measures were to be taken by the Government to remove this well-grounded discontent.

We trust all our readers will be persuaded of the importance of this apparently trivial matter. Let them not listen to those who say, "We are not Army surgeons, and as private practitioners all this does not concern us." We most earnestly impress upon them that it does, and that the fortress of officialdom must be attacked and brought to surrender if possible. The War Office is the immediate point of attack; after capturing it we may proceed to further attacks. It is not for the Army Veterinary Department alone that we are fighting, but for the entire profession. We hope that our readers will not allow themselves to be diverted from their efforts to obtain redress by any specious arguments from interested parties on the other side, but will use each his own social and professional influence to compel that ponderous machine the British Government to introduce, at the earliest possible moment, a much-needed reform.

THE "PROVINCIAL VETERINARY QUARTERLY" AGAIN.

THE second number of this extraordinary publication is before us. It appears, from a note of the editor and general factotum—for the whole production seems to be his, barring a short letter from Mr. Banham—that the world narrowly missed this renewed treat, as "our periodical has been kept in abeyance for several days by the printers owing to a dispute about the above article." We tremble as we write, for the article is a fulmination against our unworthy selves. What would a censorious world have said if the printers had got their way and burked poor Mr. Howard's publication? We should have been ashamed to look our fellow-practitioners in the face had we deprived them of any part of their legitimate amusement. Another thought occurs to us at the moment; perhaps Mr. Howard imagined himself invested with the celestial powers of Jove and had prepared a few extra thunderbolts, which the wise and merciful printer persuaded him to reserve for future use on some other victim. Of course it was very kind of the

printer, but we are quite proof against stage lightning or missiles fired from popguns and squirts, we in fact rather enjoy the fun; on the other hand, we are sorry to see an old gentleman lose his temper so completely and indulge in vituperation and wild invective, and we wish the kindly printer had deleted some of the more malignant passages.

As we said in a former article, it is not at all our intention to attack Mr. Howard as a veterinary surgeon or as a private individual. Doubtless he is admirable in these respects, but when he ventures to enter the literary field, and to challenge the world, he must expect hard knocks occasionally, just as he did when he played cricket and football. Mr. Howard is a veritable Proteus. In our former article we expressed our amazement at his versatility, especially in the assumption of names and designations; the quick-change artist was not in it with the editor of the *Provincial Veterinary Quarterly*. But a greater surprise was in store for us: Mr. Howard now informs us that he has contributed to general literature in poetry, prose, and the drama for the last forty years. What do our readers think of that? Did veterinary surgeons ever know till to-day that they had so distinguished a colleague? A man, by'r Lady, who can write not only prose and poetry, but something which apparently transcends both prose and poetry and is called drama! Why are these things hid? Why does not Sir Henry Irving produce one of Mr. Howard's dramas? It will not avail Sir Henry to say that these dramas are not published, or that, being apparently neither prose nor poetry, they would not suit his patrons. Does not Mr. Howard tell us in his own modest way that he has earned by his pen alone many hundreds of pounds? Let Sir Henry go to his bookseller and discover the hidden treasures. It would be idle to say that the labour might be wasted; does not Mr. Howard tell us that he has received the highest testimonials from the nobility and from Royalty itself? Go to, Sir Henry, what is good enough for King Edward is surely good enough for his subjects.

Mr. Howard has the most sublime self-assurance, or the most child-like innocence,—we are not sure which. He is naked, quite naked, stark naked in fact, and he is not a bit ashamed. He tells us he takes his barbarous Latin motto from Lope de Vega, and then he asks how a Spanish quotation becomes a Latin barbarity. We declare that Proteus, as described by our old friend Virgil, was not more elusive than Mr. Howard. The phrase may occur in Lope de Vega's writings, but Mr. Howard omits to give us the reference, and as Lope wrote over two thousand dramatic works, we have not been able to find time for the verification of the quotation. In any case, it is not a Spanish quotation, for it is not Spanish. It is intended by the writer for Latin, and may have been put into the mouth of some prig or pedant simply to make him ridiculous. Shakespeare used similar devices. Mr.

Howard's attempt to bolster up this barbarity—this conscious barbarity we must call it, for Lope de Vega with all his extravagance never descended to drivel—by talking about poetical licence is really a little childish. To end this silly matter we will say it was open to the editor of a veterinary magazine to choose a motto from a Spanish writer if he could find one suitable, but in that case it ought to have been a Spanish phrase, not a piece of barbarous Latinity, even if such a monstrosity happened to be imbedded in the work of a Lope de Vega or a Calderon.

Having, as he imagines, defended his chief motto, Mr. Howard proceeds to break a lance in defence of his second, which he informs us mysteriously is real Latin this time; there is no mistake about number two, oh no; number one may be a trifle shaky; Lope was merely one of those rascally poets to whom we "never apply for correct composition," but number two is unquestionably the genuine article. We must really quote a delicious phrase which accompanies this statement. Mr. Howard seems to chuckle with joy when he tells his readers that motto number two was "the decoy duck that slew him," that is, the Editor of THE VETERINARY JOURNAL—ourselves. Strange to say we are still in the flesh and walking about the streets of Edinburgh, and when we do succumb to grim death we hardly fancy it will come in the shape of a decoy duck. What follows is the most appalling farrago of nonsense we have ever seen. Has Mr. Howard no literary friend to revise his compositions? Has the kindly printer no influence over him? Just listen,—*Juvamus Naturæ per Scientiæ* means "We judge of Nature by the Sciences"! Not only have we this astounding translation, but the whole sentence is parsed and analysed, and we are soundly rated for not giving our version of it. We rub our eyes and read the passage over again; we expect a little joke, but no, the editor of the *Provincial Veterinary Quarterly* is in deadly earnest; he takes himself very seriously indeed, which is a pity.

The remainder of the article is very sad reading, being nothing more than a coarse and vulgar lampoon unrelieved by any spark of wit. As Mr. Howard imagines himself to be a classical scholar, we will tell him that a learned friend, to whom we showed his frantic ravings as exhibited in the article under discussion, said that the only man to whom he could compare the author was Thersites, and the comparison was anything but complimentary. This friend, being a lawyer, pointed out further that the article was not only brutal in its scurrility, but distinctly and shamefully libellous. Mr. Howard in his vindictive transports forgets all decorum. He not only pours forth his fury on our humble selves, but so far forgets himself as to calumniate the dead. To speak as he does about the late Dr. Fleming and the late Principal Williams is a shocking offence against decency. Such violations of the code of honour invariably bring their own punishment, and these are so gross that retribution must follow soon. We refrain from

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further comment; we leave the profession, with its nice sense of honour, to condemn the perpetrator. Mr. Howard pleads the privilege of age; we admit the plea, but the feeling that dominates us at the moment is disgust.

[Since writing the above we have come across an editorial notice of Mr. Howard's Journal in the *American Veterinary Review*, which is so strongly expressed that we simply dare not print it. Most of our readers will be able to see this review for themselves, as it is an old-established and well-known veterinary journal, the present number (for July 1902) being 4 of vol. xxvi. We confess to having had a surreptitious but none the less hearty laugh over the amusing criticism of our American colleague. If his wit is distinctly caustic, we recognise the importance of such treatment in severe cases. At the same time we blush to think that an Englishman and a member of our profession should have brought down upon himself such a dire castigation, because the discredit reflects itself upon his fellows. Let Mr. Howard read this article and one which appeared in the *British Medical Journal*, and cease to boast about the absence of discordant notes.—*Ed.* V. J.]

Royal College of Veterinary Surgeons.

A MEETING of the Council was held at the College on the 3rd inst., Mr. Alexander Lawson being in the chair. The following members signed the attendance book :—Messrs. Abson, Banham, Barrett, Byrne, Carter, Dewar, Dollar, Fraser, Hartley, Locke M'I. M'Call, M'Fadyean, M'Kinna, Mason, Mulvey, Mettam, Penberthy, Shave, Shipley, Simpson, Trigger, Villar, Wartnaby, W. O. Williams, Mr. Thatcher (Solicitor), and Mr. A. W. Hill (Secretary).

Mr. A. C. Cope wrote regretting his inability to attend.

ELECTION OF PRESIDENT.

Mr. TRIGGER.—I have very great pleasure in proposing the name of a gentleman who, I believe, will be acceptable to the Council generally; I allude to Professor Owen Williams.—(Cheers.) I believe that the respected memory of Professor Williams' father will ensure the son a cordial reception. I think it is also time that the Presidency went back to Scotland. Professor Williams by his own merits has claims to this position which we must heartily recognise. It is not necessary for me to occupy the time of the Council by mentioning them, but I am sure, if you see your way to electing him President of the Royal College of Veterinary Surgeons, he will do his utmost for the profession, and fill the position with credit to himself and to the College.

Mr. HARTLEY.—I have much pleasure in seconding that nomination.

The motion was carried with acclamation.

Mr. ALEXANDER LAWSON then vacated the chair, which was taken, amidst applause, by Professor W. O. Williams.

The PRESIDENT.—Gentlemen, I beg to thank you most heartily for the great honour you have done me in putting me, a comparatively young man, in the Chair. I am quite certain that as those of you who were on the Council at that time supported my father in the Chair twenty-two years ago, you will support me in my endeavours to promote the welfare of this profession. It is rather a curious coincidence that I happen to be the son of a President and succeed the son of a President. It is also a great pleasure to me that the ex-President and myself were pupils of a President and ex-President. I feel it a very great honour to be elected, and I thank you most sincerely.

Mr. MULVEY moved a hearty vote of thanks to Mr. Lawson, who, he said, had fulfilled the duties of his office to the satisfaction of every member of the Council.

Mr. LOCKE seconded the proposition, which was carried unanimously.

Mr. LAWSON briefly responded.

The following gentlemen were unanimously elected Vice-Presidents :—Messrs. Lawson, Simpson, Abson, Shave, Barrett, and M'Call.

Mr. WRAGG was unanimously re-appointed Treasurer, and Mr. A. W. Hill was also unanimously re-appointed Secretary and Registrar.

QUARTERLY MEETING.

The Ordinary Quarterly Meeting of Council then took place. The members present at the previous meeting signed the obligation book, with the addition of Colonel Lambert, Colonel Duck, and Mr. Bower.

The Minutes of the previous meeting were confirmed.

The SECRETARY read the Obituary List.

Mr. TRIGGER referred with great regret to the death of Professor Edgar, of Dartford, who had sat on the Council for several years, and had won the affectionate regard of every member of the Council, and moved that the sympathy of the Council be extended to Professor Edgar's family, and that the Secretary be instructed to write to Mrs. Edgar communicating the Council's sympathy with her in her bereavement.

Professor PENBERTHY seconded the motion, which was unanimously adopted.

Mr. MASON believed that the time had come to erect in the building some memorial to veterinary surgeons who had died in South Africa, and thought some notice should be taken of the manner in which the profession had come to the front and assisted the Army Veterinary Department. He proposed that some simple memorial should be erected in the building.

Mr. BYRNE seconded the motion.

Mr. TRIGGER asked whether Mr. Mason proposed to give the profession an opportunity of subscribing?

Mr. MASON said the cost would not be great, and it might come out of the funds of the College. He simply suggested a brass plate, but a committee could formulate the scheme.

The resolution was carried, and a sub-committee appointed, consisting of the President, Mr. Simpson, Mr. Byrne, and Mr. Mason.

Mr. BYRNE suggested that the committee should take notice, not only of those who had died, but of those who had so signally and gallantly performed their duty under very difficult and disadvantageous circumstances in South Africa.

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CORRESPONDENCE.

A letter was read from Mr. Hutcheon, of the Department of Agriculture, Cape Town, acknowledging his election as an Honorary Associate of the College.

A letter was read from Professor W. O. Williams stating that at the next Meeting of Council he proposed raising the question as to whether or not initials of other degrees than veterinary degrees or initials of honours from the late Queen, &c., should or should not be officially recognised in the Register.

A letter was also read from Colonel Nunn in which he said: "I am sorry to have to trouble you about the additions in the Register after my name, but I have been requested by several members to bring the matter forward to be argued before the Council. The argument is that Barrister-at-Law is a degree given by the Inns of Court, a corporation authorised to grant degrees like a University. In the Register of 1901, Dr. Fleming is shown as LL.D. of Glasgow, an honorary degree in Law and Logic. In the Register of 1902, No. 1449, Veterinary-Lieutenant Hahner is shown as a B.A. of the Royal University of Ireland, a degree in Arts. In neither of these cases is the qualification or degree a medical one. I think the argument will hold water. The qualification is not shown in the English Army List, but in the Indian quarterly one it is, under the heading 'Officers who have been admitted to the degree of Barrister-at-Law.'"

Mr. SIMPSON.—Are we to gather from that letter that there has been an omission in adding the degree?

The SECRETARY.—No; Colonel Nunn has explained it to me personally. He says that he should like all the initials and titles to be at the end of his name in the Register. It was brought before the Committee a short time ago, and it was ruled that the Register of Veterinary Surgeons was not for any particular degree.

Mr. SIMPSON.—I beg to propose that the Secretary be instructed to add these degrees to the name.

Mr. MULVEY.—I second that.

Professor METTAM.—Veterinary-Colonel Nunn has already sixteen letters after his name, and if he is not satisfied except in adding to that number, I think the Council should agree.

Mr. MULVEY.—It is not Colonel Nunn, but a matter of principle. Our profession is far too modest. It hides its light under a bushel, and I certainly think that if a member has any claim to degrees of a higher kind, or any degrees whatever, he has a right to ask us to put them after his name. Degrees granted by the medical profession are put after the names of those who have obtained them in the Register, and, therefore, why not other degrees?

Professor PENBERTHY.—I quite agree; but there is no similarity between a qualifying degree in law and a qualifying degree in medicine. A degree in veterinary medicine is second to human medicine, and I am sure no one here will try to attempt to dissociate human from veterinary medicine. If every one likes to put down his qualification in our Register, which he has obtained either by examination or not, I do not know where the thing will end. I have no objection to Veterinary-Colonel Nunn being described as a barrister-at-law, because it is most important that we should know, and everybody should know, that we have barristers-at-law in the profession; but why it should be done as a matter of right I do not know.

Colonel LAMBERT.—I think it should be made a question of right and should be granted. What is the good of our taking positions if we cannot have it recorded? I received a most important letter asking me to bring this subject before the Council. We shall never get anything if we do not bring forward our honours and defend them.

Mr. M'KINNA.—Our Register ought to be more of a directory, and when we look up a man's name tabulated in a certain alphabetical order we should be able to discover what the man is. Our Register is very insufficient as it stands. All degrees should be certainly noted.

After some little discussion the resolution was carried.

A letter was read from Messrs Horsburgh and Brydon with regard to Principal Williams' Memorial, in which they said: "The trustees appointed for the administration of this Memorial Fund had a meeting to-day, when they preliminarily considered the matter of the Portrait of the late Principal to be presented to the Royal College of Veterinary Surgeons. We are instructed to ask you if you think the Council would accept, to be hung in the Council Chamber, a half-length or kit-cat size portrait, in the event of the Trustees not seeing their way, through the smallness of the fund, to provide a full-length portrait? There will be another meeting on Wednesday next, and we should be obliged if you would be good enough to let us hear from you before then."

Professor DEWAR.—I am one of the Sub-Committee of this Portrait to the late Professor Williams, and I think it is as well to let the Council know that an artist has been commissioned to paint a three-quarter size portrait. We have no photograph of the late Principal at full length, and we find that some of our artists have a great objection to painting full-length portraits, especially with nothing but photographs to guide them. We have consulted the best artists in Scotland, including the President of the Scottish Academy. It was thought better to take the best portrait we could get, and that was a three-quarter length.

A letter was read from the Borough Engineer of Lambeth soliciting an expression of opinion as to the action taken by the St. Pancras Borough Council for checking the spread of glanders.

On the motion of Mr. Mulvey, seconded by Mr. Lawson, it was resolved that a courteous reply should be sent to the Borough Surveyor informing him that the Royal College of Veterinary Surgeons was not a consulting body.

A letter was read from the Secretary of the Public Health Congress to be held in Exeter acknowledging receipt of subscription, and asking for the names and addresses of the delegates; and on the motion of Mr. M'Kinna, seconded by Mr. Simpson, the President was appointed to represent the College.

A letter was read from the War Office, dated 25th June, to the following effect:—"I am directed by the Secretary of State for War to acknowledge receipt of your letter of the 7th inst., in which you forward representations from the Council of the Royal College of Veterinary Surgeons on the conditions of service in the Army Veterinary Department; and to acquaint you in reply that the matter is under consideration, and a further communication will be made to you hereafter." Mr. Lawson explained that at the annual meeting held about three weeks ago it was thought desirable, in view of the urgency of the matter, that a meeting should take place to consider the new Army Warrant, and he asked every member of

the Council that he could find, and a meeting was held. A sub-committee was formed, and suggestions were sent to the War Office, and this letter was the reply.

Professor PENBERTHY pointed out that a resolution had been proposed by Mr. Simpson and seconded by himself at the last Council meeting, and desired to know what was the result?

Mr. MULVEY said that no answer had been received, the only reply being the issue of a new Army Warrant which was regarded as altogether unsatisfactory. He moved that the letter which was sent to the Secretary of State for War be read.

Mr. MASON seconded the motion, which was agreed to; and the secretary then read the following letter which was forwarded to the Secretary of State for War to which the letter just read was the reply:—"We, the Council of the Royal College of Veterinary Surgeons, representing our profession, beg again to bring before your notice the condition of the Army Veterinary Department, and the grievances of the officers serving in it. We would remind you that you were good enough to receive a deputation from the Royal College of Veterinary Surgeons on the 29th June 1901, and as a result a Royal Warrant for the improvement of the position of the Army Veterinary Department officers was promulgated on the 20th March 1902. The improvements in promotion, pay, and pension granted by this Warrant are, we regret to have to inform you, considered utterly inadequate by the members of our profession, and will not help to fill the depleted ranks of the Department, in which we beg to remind you there are about thirty vacancies with no prospect of suitable candidates coming forward. We wish to point out the following:—(1.) The persistent refusal to grant army rank to the Veterinary Army Department officers, who alone of any branch of His Majesty's Service do not enjoy this privilege. (2.) The lack of authority in their own hospitals and over their own subordinates. (3.) The appointment of a combatant officer as Inspector of Veterinary Hospitals in South Africa. (4.) The mere fact of his being a veterinary officer renders him ineligible to purchase remounts on his own responsibility, although he is considered specially qualified to purchase horses in civil life. (5.) That the same reason prevents his being appointed as aide-de-camp to a general officer, even when his services have been specially asked for. These disabilities of our military brethren we look upon as degrading, and calculated to lower our status as a profession in the eyes of the public, to both our social and financial disadvantages. We are of opinion that an invidious distinction is made between our graduates and those of the medical profession in the Royal Medical Corps, and that the periods of service for promotion to the ranks of Captain and Major should be the same in each. We are of opinion that veterinary officers should have charge of and authority in their own hospitals and over their own subordinates, as in the Royal Army Medical Corps, with army ranks and titles. We are of opinion that an adequate retiring pension of £355 per annum should be given at twenty years' service, as in the Royal Army Medical Corps, and not at twenty-five years as at present, which is another invidious distinction. We are of opinion that executive officers of over twenty-five years' service should receive the rank of Lieutenant-Colonel, and administrative officers the rank of Colonel, with corresponding rates of pay and pension as in the Royal Army Medical Corps. Also that the Director-General should rank as Major-General, with the rate of pay and pension now drawn by the

Deputy Director-General of the Army Medical Service. We are of opinion that the rates of pay given in India are inadequate, and should be revised, that 'charge pay,' 'specialist pay,' and 'study leave' should be given. We pray that these present grievances may be rectified at an early date, and the above concessions granted, as the educational attainments of our graduates are on a par with those of the medical profession; otherwise, we have to regret to inform you that, as the elected guardians of our profession, we feel we cannot advise the younger members of it to enter the Army Veterinary Department. In fact we are of opinion that we should be failing in our duty did we do so."

On the motion of Mr. Mason, seconded by Mr. Shipley, the action of the sub-committee was confirmed.

PRESENTATIONS TO THE LIBRARY.

The SECRETARY announced that the following presentations had been made:—Photographs of Members of Council, presented by Mr. Lawson; four Picture Plates from Messrs. Colman; Copies of the "Veterinarian" and the "Veterinary Journal" for three months; "Transport of Horses by Sea," by Veterinary-Lieutenant E. E. Martien; "Lectures on Saddlery and Harness," by Lieutenant-Colonel J. H. Nunn; and the Calendar of the College of Preceptors for 1902.

On the motion of Mr. Carter votes of thanks were accorded to the donors.

COMMITTEE'S REPORT.

Mr. TRIGGER read the report of the Finance Committee, which stated that vouchers and receipts for payment during the preceding quarter had been examined and passed, and that the quarterly statement of the treasurer showed a balance of £134 : 16 : 7. The committee further reported that the present liabilities were recommended to be discharged.

Mr. TRIGGER moved the adoption of the report.

Mr. LOCKE, in seconding the motion, pointed out that last year there was a balance of £46 on the year.

Professor PENBERTHY was very pleased to hear of such a balance, but pointed out that quite recently the College had had to sell £300 of Consols. He should like, if he was in order, to make a proposition that the Privy Council should be consulted, first, as to whether it was possible to get the power to charge a Registration fee, and next, the means by which that power might be obtained. If such a fee could be obtained it would considerably assist the finances.

Mr. BARRETT dissented from Mr. Locke's optimistic view, and believed that during the last two years the College had lost perhaps £500, taking into consideration the dividends which had been received from Consols. When the Irish examinations were properly instituted and the necessary expenditure had been incurred, probably the loss would be greater still, and therefore he supported the view expressed by Professor Penberthy. It had been felt that a new charter was required with regard to many subjects, and perhaps a committee might be appointed to consider the question, and amongst the other matters the question of the financial rehabiliment of the College.

Mr. TRIGGER could not endorse Mr. Locke's view, although the College was in a better position than he had thought would be possible. Mr.

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Locke had overlooked the fact that the balance in hand was largely due to Fellowship fees, which were not to be relied upon as a source of income. The serious point of the position was that the College was living upon its capital.

Professor PENBERTHY did not wish the matter mixed up with a Charter Committee, and he did not think the point could be gained by charter.

The SOLICITOR said a Registration fee could not be obtained by charter. The question was, if a Registration fee was adopted, how was it to be enforced? It was certain that no charter would give the veterinary profession the power possessed by solicitors. At the present time the College had only power to strike a man off the Register under section 6 of the Act, and for nothing else. The law officers would never allow a charter to be passed such as had been proposed, and even if they did, it would be of no use. A fresh Act of Parliament was required, but whether it could be obtained in the face of the opposition which might be put forward by a number of the profession was another matter. If the College was going to embark upon the obtaining of such an Act it would have to make up its mind to a pretty hard fight and the expenditure of much money.

Professor M'FADYEAN could not understand why a body should not reckon the dividends on invested funds as part of its income, and said that Mr. Locke's statement had not been destroyed by anything that had been said. The fact remained that on the whole year's proceedings there was a balance, and if anybody said the dividends on the invested funds ought not to be reckoned as part of the income, he should like to ask for what purpose the College had accumulated the funds. He thought it was a fact that there was an increase in the entrants at all the Veterinary Colleges, or the majority of them, and it was to be hoped that the Council had really passed the worst with regard to the financial situation.

Professor SHAVE thought that if the Registration fee was raised to £5 it might meet the difficulty.

The report of the Finance Committee was adopted.

On the motion of Mr. BARRETT, seconded by Mr. WARTNABY, the Finance Committee were instructed to consider the question raised by Professor Penberthy with regard to the fees.

REGISTRATION COMMITTEE.

Mr. SIMPSON read the report, which stated that applications for restoration of names to the Register were received from Messrs. M. H. Andrews, A. G. Leaney, and C. E. Norgate, which had been removed in accordance with section 5, sub-section 4. Satisfactory evidence having been given in each instance, the Committee recommended the restoration of all three names. The Committee reported that satisfactory undertakings had been received in several cases, one case struck out of the list, and in another the solicitor could not recommend any action being taken. In another case the solicitor had reported that he had seen a member of the College against whom a complaint was made for advertising, and had found that the advertisement was not issued with his authority, and that a letter repudiating it had been published in the paper in which it was issued. The Committee considered the explanation quite satisfactory. The Committee also reported that it had considered several new cases, and recommended certain prosecutions.

On the motion of Mr. SIMPSON, seconded by Mr. MULVEY, the report was received and the seal of the Council affixed to certain prosecutions.

Mr. SIMPSON moved that the report of the Registration Committee be adopted, which was seconded by Mr. MULVEY.

Mr. TRIGGER.—Arising out of the report of the Registration Committee, I beg to bring forward a matter of which I gave notice to the Committee yesterday. It is one upon which I know there is a difference of opinion, and that my opinion does not coincide with the opinions of members of the Registration Committee, whose opinions I value very highly. But I venture to think that it is one I might very well bring before the Council, and take the opinion of the Council upon it as an instruction to the Registration Committee,—I allude to the question of taking no notice whatever of anonymous communications sent to the Registration Committee. I cannot see myself any necessity for anonymous communications. Any member of the profession sending a complaint should be fully aware that the complaint, if it comes in his own name, is quite private, and is not even read out unless asked for in the Committee Room, and there is no fear of the name being divulged.

On an objection by Mr. Fraser, the President ruled that the discussion was in order.

Mr. TRIGGER.—If a member of the profession sees a case and does not care to send it to the Royal College of Veterinary Surgeons, it is quite easy to obtain a list of the members of the Registration Committee and send it to any member of that Committee, and if it was thought there was a case, the member would send it to the Secretary with a member of the Registration Committee's name upon it as complainant, in which case that member would not adjudicate. This is a little safeguard against many of the ridiculous cases brought before us without any shadow of foundation. I utterly fail to see that there is any good to be gained by taking notice of anonymous communications, and I think it is opposed to what we all consider to be the best interest of English traditions and absolutely opposed to what is fair. If a complaint comes before us it should be backed by the name of some one who is responsible for bringing it before the Registration Committee. I therefore beg to move that it be an instruction from this Council to the Registration Committee to take no notice of anonymous communications.

Mr. DOLLAR.—I have great pleasure in rising to second the proposition of Mr. Trigger. I think myself there is some cause for suspecting occasionally that the Registration Committee is inclined to look upon an accused man as a guilty man, and I cannot help fancying that the consideration of anonymous accusations lends some weight to that view.

Mr. MULVEY.—Are you speaking for yourself, or are you accusing any one in particular?

Mr. DOLLAR.—I am not accusing any one in particular. If I did I must name the person. I express my own opinions; I cannot express those of other people.

Mr. MULVEY.—You have no right to insult any individual member of the Committee.

Mr. DOLLAR.—I am not trying to insult any member; I am stating my opinion.

Mr. MULVEY.—You are stating a lie.

Mr. DOLLAR.—Did the remark of this gentleman come to the ears of the Chair, Sir?

The PRESIDENT.—I did not hear any special remark; I heard a mutter which I did not understand.

Mr. DOLLAR.—Which, I suppose, the Chair considers unworthy of observation. However, there are other and stronger grounds in my opinion for refusing to consider anonymous communications. In the first place, if the person who makes the complaint is really afraid that physical consequences of a painful nature might accrue to him, he may rest perfectly assured that his name does not in the ordinary course of events travel beyond the knowledge of the Registration Committee. I think that even those who differ from me will agree with that remark, and will agree with the fact that the strictest secrecy is always observed in these matters. But in addition to that I would like to point out that there are two classes of complaints; there are complaints which are justified and complaints which are unjustified. The complaints which are justified should carry the name of their originator, because he has claimed that he is performing a service to his profession. He is doing something for which, even though his name is revealed, he deserves our thanks, and for which I believe he would receive the thanks of the great bulk of the profession; but in regard to the other complaints—I am very sorry to say that we have had more than one example of them before the Registration Committee—complaints in which either the case is of a trumpery description or in which the evidence is not of a fair character, or in which it is distinctly misleading or even manufactured—I think we should insist on knowing from whence it originated before taking any steps in regard to it. The view has been put forward that we are here simply to collect evidence and utilise it, but I do not think that is so. I think the adoption of that view places us in the position of being a prosecuting body, and it is essential, if the Registration Committee is to occupy the position in the estimation of the profession which is its right, and to wield the authority which I would like to see it wield, that its proceedings should be of a judicial character, and it should receive the support of every member of the profession. Unfortunately we have not been without evidence that malicious charges are made at times—malicious charges of an exceedingly difficult character to detect—charges which have certainly drawn the Registration Committee into a false position, and charges which would never have been taken up or acted upon by the Registration Committee had not it been for this unfortunate tendency to consider cases which were not authenticated by the name and address of their sender. The Registration Committee has suffered in the general estimation of the profession as a consequence of such cases, and members of the profession have also suffered in their reputation, and suffered mentally, suffered moral degradation, and suffered from a financial point of view. That is a matter which I think even the members of the Registration Committee who differ from me on other points will agree with me in deprecating, and it is a matter which can be easily disposed of if the motion which is brought forward by Mr. Trigger is adopted here to-day. There need be no fear that by so doing we shall encourage any overt act on the part of the members of the profession. It is undoubted that if any member of the profession is really offending against his fellows to any serious extent there would never be a time when members would not, either from a sense of public spirit or from a sense of justice, be prepared to come forward, even though it were at some inconvenience, and draw attention to such improper acts. If that motive were wanting, there would be quite sufficient safeguard

in the private feeling of practitioners whose rights had been outraged to secure properly authenticated complaints.

Professor PENBERTHY.—I have no desire to support or encourage anonymous communications of any kind, but surely we cannot deny the value of even anonymous communications. As regards the jurisdiction in this country, I regard this Council as a court of inquiry, not exercising judicial functions which would put the complainant and defendant into the position in which they are put in the ordinary courts of law. What do we see in our police courts every day? Constable Jones took the oath—"From information I received, I went to so-and-so"——

Mr. TRIGGER.—I rise to a point of order. The constable is entitled to give his informant's name.

The PRESIDENT.—I am afraid we cannot discuss the evidence given in police courts.

Mr. BARRETT.—Professor Penberthy is surely justified in giving a parallel case to one which we intend to argue.

Professor PENBERTHY.—In face of the ruling of the President I will not go any further into that matter. You all understand how information is given in judicial courts. What difference can it make if we have the knowledge? We have come here to sift the evidence which is before us, and what difference can it make to that evidence, if we sift it properly, as to who sent it, or as to whether it is sent anonymously? I do not want to appeal to your common sense further than that. If we are in possession of evidence saying that a member of the profession has been doing unprofessional acts—it does not matter how it came to us—if we do not act upon it by making an inquiry into it then we are doing wrong.

Mr. BARRETT.—I desire very briefly to express my view in regard to this matter. It was noticeable at the meeting yesterday that a considerable amount of heat and personal feeling was brought into the discussion. I think it is much to be regretted that these matters which appertain to the Registration Committee cannot be conducted wisely and patiently and judicially. We are often reminded that this committee exercises judicial functions, but those who sit upon it seldom, I think, show judicial patience or judicial wisdom. ("Oh, oh!")

Mr. BARRETT.—Surely that is not a personal remark. My remark appertains to the committee as a whole. ("Oh, oh!") To my mind this question is one of little importance after all. Sometimes I think you waste a lot of time in quibbling over matters which do not really appertain to the well-being of the profession, nor are they objects which materially further the objects we have in view. Is it a matter of any real consequence whether the actual informant sends his name, or whether he does not? I can quite appreciate the position which Mr. Trigger takes up. I differ from him. I recognise at once, of course, that his opinion upon this subject, as on all others, is honest and straightforward. He seems to regard it as of much importance that the man who sends this information should give his name. I do not. I agree with what has fallen from Professor Penberthy, that we are not here to consider from whom the information comes, but we are here to consider the evidence brought before us. It is upon that evidence, and upon that evidence alone, that our judgment should be given. It is sometimes objectionable that the name of the informant should be given to the committee. (Hear, hear.) There are some of us who sit on this committee that at times are inclined to be influenced against a man when

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his informant is a man of high position in the profession. There are others of us—I may be one—who may be inclined to crush a man when he is down, and when he needs, perhaps, our sympathy and our support. (No, no.) We had an instance yesterday where an exceptional course was taken because a man occupied an exceptional position in the profession.

Professor M'FADYEAN.—I think this is really a point of order. I think it is one of the most serious charges ever made against a Registration Committee, and I think the speaker should be called upon to quote the case.

The PRESIDENT.—You must either quote the case or withdraw the statement.

Mr. BARRETT.—I am not quoting any case.

The PRESIDENT.—You made a specific charge against the committee.

Mr. BARRETT.—I have mentioned no names.

The PRESIDENT.—Please quote the case or withdraw the remark.

Mr. BARRETT.—I do not think I should quote the case. I will proceed with my argument on a further point.

The PRESIDENT.—You withdraw the statement?

Mr. BARRETT.—I cannot withdraw what is true. (Oh, oh.) I hope you will not press me.

The PRESIDENT.—Then quote the case.

Mr. BARRETT.—I do not see why I should quote the case.

The PRESIDENT.—Then I cannot hear you any further.

Mr. BARRETT.—I will proceed with my next line of argument. What is Mr. Trigger's suggestion? His suggestion is that any member who desires to give information with respect to another can send that information, not to the Secretary of the R.C.V.S., but to some member of this committee, and he bases his argument upon the assumption that some member of the Registration Committee is prepared to sign his name. I heard one gentleman say yesterday, and I quite agree with him, that under no circumstances would he be a party to signing his name to a document the contents of which had come from some one else, and as to which he knew nothing. (Hear, hear.)

Mr. DOLLAR.—I quite agree with that.

Mr. BARRETT.—How is Mr. Trigger's argument going to work out? Some honest man in the country may have a real grievance against his neighbour, but he does not want to show his animosity—although his neighbour may be doing something of the vilest description. Is he to be compelled, in order to convey his information to the Committee, to give us his name? Why should he?

Mr. DOLLAR.—He is doing a public service.

Mr. BARRETT.—Mr. Dollar says he is doing a public service. Mr. Dollar argued yesterday that if the information was not found correct and the man was acquitted, an action for damages would lie against the informant. Why should the informant run that risk? Are you going to ask him to do it? If you do, I think you will act very unwisely. Many of the communications addressed to this Committee are *bona fide* and honestly given. Why should we despise the evidence brought before us because, forsooth, somebody has thought fit not to give his name? I hope I have not said anything derogatory to the Registration Committee. I recognise that this Committee exercises high and judicial functions, but I do recognise that the minds of the Committee have not been necessarily trained judicially, and that we quite honestly and honourably, without any

intention, do things sometimes which are unwise, and which ought not to be done. Sometimes in our ignorance, perhaps in the peculiar constitution of our body, things are done which had better not be done, but on the whole I do not agree with Mr. Dollar when he says that a man is regarded as guilty if he is accused. That is not so. We do the best we can according to our circumstances and information and position, and men for the most part do get a fair trial. Our desire is always to acquit them if we possibly can.

Professor M'FADYEAN.—I am very reluctant to add a single word to this debate, which I fancy is becoming somewhat wearisome to most members of the Council, but in common with others present I suppose I shall be presently asked to vote on one side or the other, and before that comes I should like to be allowed to ask a question. I do not know whether it has struck any other member of the Council that the word anonymous as used in this proposal stands in need of a definition. I should like to ask Mr. Trigger, as the proposer of the resolution, whether in his view, if the Registration Committee had sent to it a copy of a newspaper without any indication as to who had sent it, containing an advertisement flagrantly doing violence to the bye-law with which we are all acquainted, the Registration Committee would, because there was no information as to where the paper came from, take no action on it? If Mr. Trigger's answer to that question is in the affirmative, it appears to me this proposal is very absurd, and that it is very undesirable to tie the hands of the Registration Committee in the way suggested. I think, even if the action of the Council or of the Registration Committee involved a certain amount of injustice to any member of the profession, the larger rights and the protection of the privileges of the members of the profession should influence people rather than a possible injury to any single member of the profession. I do not know that the members of the Council are aware what takes place here. Complaint is laid before the Registration Committee. As I understand it, when the Secretary receives a communication bringing a charge against a member of the profession he communicates with that member of the profession and states that complaint has been made against him, and he invites him, if he so desires, to appear himself or to send a communication which will be laid before the next meeting of the Registration Committee.

Mr. TRIGGER.—I must correct that. I think you will find that the Secretary does not write to the accused if the communication is anonymous.

The SECRETARY.—That is exactly the point that should be decided upon, because if an anonymous communication be received I cannot, as a rule, say it is a trivial one, and I cannot lodge a complaint. Therefore I give no notice to the man, but if I consider it a genuine case and one to trouble the Committee with, I bring it before the Committee and say that I have not acknowledged it, because I have not thought it desirable. In all cases it is my duty to give notice to the party complained of.

Mr. BYRNE.—Do I understand that the duty of the Secretary is to communicate with the person against whom the complaint is being lodged, to invite him to lay before the Registration Committee any observations he wishes to make, or to invite him to appear before the Committee, if he so desires?

Mr. MULVEY.—That is so.

Mr. BYRNE.—I imagine the function of the Registration Committee is

to preserve the honour and good name of the members of the profession. I consider it the absolute and imperative duty of every member of the Registration Committee to consider, no matter from what source it may come, any complaint of misconduct or dishonour against any member of the profession. It would be a lamentable thing if it were alleged against the Registration Committee that to anybody's dishonour or injury they proceeded with a charge which was trivial, badly founded, or founded on malice or professional jealousy. I do not see how the proposal of Mr. Trigger will prevent that. I certainly do think it is the duty of the Committee to investigate any charge, no matter from what source it comes, in order to protect the general interests of the profession. If the protection of the general interests of the profession involve an occasional possible injury to any man, I would certainly say you are entitled to do that, but I cannot see how any one would be injured under the circumstances, and therefore I intend to vote against Mr. Trigger.

Mr. BANHAM.—I think myself that any person laying a charge should give his name to the Committee. I well remember one case in particular when the informant's name was not given and the defendant was let off. In fact they had no charge against him. If he had known the person who had informed against him he could have brought an action, as Mr. Barrett has said, but he had no opportunity. You did not tell him who his informant was. In the case of a newspaper I think the newspaper is quite good enough. It does not matter who sends the newspaper. That is quite another thing from a person informing against another person. Where that takes place I think no anonymous communications of that kind should be considered by the Committee.

Mr. TRIGGER.—I should consider a newspaper as evidence, but a cutting from a newspaper, which we constantly receive, I do not consider evidence.

The SOLICITOR.—With regard to the word "anonymous" a distinction has been always made by the Registration Committee between communications. If a man, for instance, were to write us a letter accusing a member of improper conduct and did not sign it, that letter would go into the waste-paper basket.—(Hear, hear). On the other hand, if he sent printed matter which on its face had a *prima facie* look of authenticity, that would be inquired into. That is the distinction which has been made up to the present time.

Mr MULVEY.—That is so.

Mr. BANHAM.—I hope that the Registration Committee will in future inquire, as they have in one case been asked to do, and when the case was tried they had not the information they were asked to have ready for them. It is only right to the accused.

Professor DEWAR.—I have practised in a country place myself, and I know that in small towns it is most unfair for this Council to ask the name of one practitioner who is sending up billheads and other things. We all know the feeling there is as to fair play in this country, and if it goes out to the district that such a one is doing anything, it is put down as a piece of personal spite. This Council is here rather to protect the profession than to throw the *onus* on a single individual. I would not like the statement which fell from Mr. Barrett to pass without question. I am a member of the Registration Committee, and as far as I am personally concerned I take exception to Mr. Barrett's statement. I certainly was not influenced

by the position of any one who came before that Committee or any single name.

Mr. BARRETT.—May I rise to say that I am not imputing misconduct to Professor Dewar or any other member of the Committee. I merely pointed out in my speech that a certain irregularity had occurred which was to be regretted.

The report was adopted.

On Mr. Trigger's motion being put to the meeting it was lost, seven voting for and eighteen against.

The PRESIDENT.—It is the decision of this Council that communications of any description be now received by the Registration Committee.

EXAMINATION COMMITTEE.

Mr. MULVEY read the report of the Examination Committee, which reported that Professor Dewar's motion in regard to the various synopses had been duly considered, and the Committee recommended that a copy of the syllabus should be sent to each member of the Board of Examiners, Principals, and Teachers of the various schools, asking them for suggestions in regard to any improvement, with the request that the reply should be sent in by the last week in September.

The report was adopted.

On the report of the Library and Museums Committee, attention was drawn by Mr. Carter to the state of the Museum, and a sum not exceeding £5 was placed at the disposal of Professor Shave for setting the Museum in order.

The report of the Courts of Examiners was remitted to the Examination Committee, and it was decided that in future the Secretary should remit the reports to the Examination Committee so that they might come before the Council at an earlier date.

The report of the Fellowship Examination was also adopted.

It was resolved, on the motion of Professor Mettam, seconded by Mr. Simpson, that the Registration Committee should consist of the whole Council.

The names of Messrs. Over and Banham were added to the Examination Committee, which was re-appointed, Mr. Allen's name being struck out.

The Finance Committee was also re-appointed, Mr. M'Kinna taking the place of Mr. Allen. At the request of Mr. Villar, his name was omitted.

The Parliamentary Committee was also re-appointed, with the addition of Messrs. M'Kinna and Over, Mr. Allen's name being deleted and Mr. Barrett retiring.

Professor Mettam's name was added to the Library and Museum's Committee in the place of Mr. Allen's and the Committee re-appointed, Mr. Barrett retiring.

The Publication Committee was re-appointed, with the exception of Mr. Barrett, who retired, and with the addition of Messrs. Over, Banham, and M'Kinna.

Mr. Woodger and Mr. Warriner were re-elected auditors.

The Walley Memorial Examination was fixed for Saturday, October 4th.

The dates of Committee and Council Meetings were fixed for the 8th and 9th of January, the 8th and 9th of April, and the 1st and 2nd of July.

The following dates were fixed for the examinations :—December : the Written on Friday 12th, the Oral to begin in London on Monday, 15th. May : the Written in Scotland on Friday, 15th, the Oral beginning on the 18th. July : Written, Friday, July 10th, Oral commencing Monday, 13th.

MOTION BY MR. FRASER.

Mr. FRASER moved—"That this Council take immediate steps to secure the return of a veterinary surgeon to Parliament." He argued that the policy suggested was one likely to be followed with a certain amount of success. He considered that if a veterinary surgeon were in the House he would be able to put before Parliament the whole facts of matters affecting the veterinary profession and thus be enabled to do a very great deal of good. Mr. Fraser did not desire to enter into details in the presence of the reporter, and accordingly the Council went into Committee to consider the matter.

On the Council resuming, the President stated it had been agreed "That this Council take immediate steps to secure the return of a veterinary surgeon to Parliament, and that the question be remitted to the Parliamentary Committee for consideration."

Mr. VILLAR drew attention to the inadequate fees paid to veterinary surgeons in connection with Metropolitan Police Court work, and on his initiative the Council appointed a small Committee to further consider the matter and with power to act, if necessary, jointly with Metropolitan practitioners. The Committee consisted of Mr. Mulvey, Mr. Fraser, Professor Penberthy, and himself.

Mr. MASON seconded the motion, which was unanimously agreed to.

By this time there was no quorum, and the meeting terminated.

A special meeting, which was to follow the ordinary meeting, in order to consider the following alteration of bye-laws proposed by Mr. Dollar, was therefore not held :—"That should any member of the R.C.V.S. who may be accused of conduct disgraceful in a professional respect notify the Secretary more than ten days before trial of his desire to be tried publicly, facilities shall be given for the admission of members of the profession to the trial and for the independent reporting of the evidence."

Royal College of Veterinary Surgeons.

July 1902.

AT meetings of the Board of Examiners held in London and Dublin on July 10th for the Written, and on and between July 15th and 19th for the Oral and Practical Examinations, the following gentlemen passed their final examination :—

Messrs. J. F. Craig,* A. A. Donnelly, S. Dodd, T. S. Green, A. Goodall, J. R. Godbold, H. E. Gibbs, J. G. Fitzgerald, H. B. Hiles, W. N. Jürgenson, T. J. Kelly, A. R. Littlejohn, R. Morford, J. H. L. Lyons, R. E. Mosedale, A. Magee, G. P. Male, G. H. Rainforth,

Z. B. Rutherford, H. Sanderson, G. Sutton,* A. Spreull,* C. W. Townsend,* H. X. Turnbull, W. G. Wragg, A. H. Watson, S. J. Young.

The following passed their Third Examination :—

Messrs. J. C. Broad, T. Bowett,* W. Cathorn,* G. A. Dibben,* A. N. Foster, W. S. Gillespie,* H. J. Holmes, R. J. Hills, T. S. Hunter, R. Hayes, H. L. Jones, T. Love, A. S. Leese, A. R. Lewis, H. P. Lewis, H. Mason, H. Newton, F. B. Neal, E. O'Reilly,* F. C. O'Rorke, F. R. Staples, V. de V. Woodley, W. H. Walker,* G. E. T. Anderson (Dublin).

The following passed their Second Examination :—

Messrs. J. J. Aveston, R. Bennett,* J. Blakemay, L. G. W. Bevan,* E. Brown,† T. Bone, C. Crowhurst, R. Casey, W. T. Collins, H. C. Dibben,* W. J. Dale,† T. C. Graves, F. Hewson, J. R. Hodgkins,* B. H. Lane, G. O. Ogden, R. L. Phillips,† D. Quinlan,* H. Sproston, T. V. Steward, W. Trigger, W. Urquhart, E. R. H. Woodcock * (Dick Veterinary College, Edinburgh), J. Craig.

The following passed their First Examination :—

Messrs. J. O. Andrews, W. A. Broad, W. T. M. Browne,* R. Brandford,* E. Belcher, T. A. Blake, T. Bell, W. L. Brookes, F. W. Chamberlain,* A. S. Chisholm, L. Danels,* L. A. F. Dawson,* J. Forrest, J. J. Godber,† B. M. Gunn, J. R. Hemer, A. L. Horner, H. A. Lake,* T. R. Lydford, D. C. Matheson,* R. B. Palmer, C. E. Parsons, P. Stanley, C. S. Simpson, G. C. Sooby, W. H. Simpson,* H. C. Stewart,* W. H. Thomas, W. H. Taylor, C. P. Wellington, J. B. Welham, W. D. Williams, W. C. Wilkinson, H. S. Ward, A. Young, J. S. Young, G. Pinchin.

ROYAL VETERINARY COLLEGE OF IRELAND, DUBLIN.

The following passed their Second Examination :—

Messrs. A. Baker,* M. Barlow, A. C. Duncan,* J. J. Fleury,* E. P. Hearne, F. A. Heney, J. Lynch, R. G. Melville, R. Moore, J. A. O'Leary, S. G. P. Richardson, G. W. Tyson, E. A. P. B. C. White.*

The following passed their First Examination :—

Messrs. A. W. Allan, J. K. Campbell, T. J. Clinton,* E. J. Devine, F. Flynn, R. M. Harrison, H. V. Kenny, W. A. King,* P. J. Walsh.

Marked thus † passed with First Class Honours.
" * " Second " "

ARTHUR WM. HILL, *Secretary.*

Original Papers.

CALCULI.[1]

BY J. F. BUTTERFIELD, V.S., SOUTH MONTROSE, PA.

CALCULI are concretions which may form in every part of the animal body, but are most frequently found in the organs that act as reservoirs, and in the excretory canals. They are met with in the joints, biliary ducts, digestive passages, lachrymal, mammæ, pancreas, pineal gland, prostate, lungs, salivary, spermatic, and urinary passages. The causes which give rise to them are obscure.

Those which occur in reservoirs or ducts are supposed to be owing to the deposition of the substances which compose them from the fluid as it passes along the duct; and those which occur in the substances of an organ are regarded as the product of some nutritive irritation.

Their general effect is to irritate as extraneous bodies the parts with which they are in contact, and to produce retention of the fluid whence they have been formed.

The symptoms differ, according to the sensibility of the organ and the importance of the particular secretion whose discharge they impede.

Their solution is generally impracticable. Spontaneous expulsion or extraction by surgical aid is the only way of getting rid of them.

Arthritic calculi concretions form in joints. Similar calculi are found in the ligaments and other parts. They sometimes cause rheumatic lameness and excessive pain. They are composed of uric acid, soda, and animal matter.

Biliary calculi are most frequently found in the gall-bladder (in those animals which have one); in others, in the substance of the liver or in the branches of the ductus hepaticus. The causes of biliary calculi are also very obscure. They are usually composed of cholesterine and the yellow matter of the bile.

They may occasion violent abdominal pain. In our patients we would be unable to make a correct diagnosis. Abscesses, biliary fistulæ, and fatal effusions into the peritoneal cavity may follow.

Calculi lachrymal sometimes, but rarely, form in the lachrymal passages. They may occasion abscesses and fistulæ.

Calculi of the mammæ have been found in this organ of a yellowish-white colour, having the shape of the excretory duct. They are liable to cause abscesses, and may be removed through the abscess.

Calculi of the pancreas.—These are but little known. They are supposed to resemble the salivary.

Calculi of the pineal gland.—No phenomena announce their presence during life. They are composed of the phosphate of lime.

Calculi preputial are composed of sabulous and exfoliated matter. They may occasion symptoms similar to urethral and vesical calculi. Have seen them in oxen as well as in the male equine. They should be removed with the oiled finger.

Calculi of the prostate are usually composed of uric acid. Symptoms common to those of calculi of the bladder are likely to develop.

Pulmonary calculi are usually formed of carbonate of lime and animal

[1] Presented at the Annual Meeting of the Pennsylvania State Veterinary Medical Association, March 4 and 5, 1902.

matter. They are sometimes met with in the dead body by butchers, and in autopsies, without seeming to have produced unpleasant symptoms during life, or they may cause symptoms of phthisis; at other times they are expelled spasmodically.

Salivary calculi are concretions usually formed of phosphate and carbonate of lime. They are developed in the substance of the salivary glands or in their excretory ducts. In the first case they may be mistaken for a simple swelling of the gland, in the second they may generally be detected by the touch. They should be extracted by incision in the interior of the mouth. If taken from the outside it would occasion a fistula that it would be difficult to close. The writer removed one (weight, four ounces) from a grey mare belonging to a Mr. Vail. It was situated in Steno's duct, near the entrance to the mouth. With a mouth speculum to hold the mouth open, and a small scalpel, I was enabled to remove it readily.

Calculi of the stomach and intestines.—Gastric calculi could not be formed in the stomach itself on account of the acid reaction of its contents and because of the short time the alimentary matter remains there. (In ruminants it may be otherwise.)

The anti-peristaltic movements of the intestines bring them back to the stomach from the intestines. Calculi are ordinarily formed in the large intestines; colons, rarely in the cæcum. The causes which give rise to them are ingestion of hair during shedding, or feeding ripe hairy plants, as clover, millet, soja beans, &c.; also feed rich in magnesia and lime phosphates. Intestinal concretions vary in their composition. They are light, hard, and very fœtid. While they do not obstruct the passage of the alimentary mass, they produce no unpleasant symptoms. At times they may be diagnosed by examination per rectum. The violent symptoms occasioned by them are frequent colics, of a periodic character, of a more rapid course than is due to accumulation of alimentary matter in the intestinal reservoirs. Treatment: in desperate cases laparotomy may be attempted. A case we diagnosed as intestinal concretion recovered after several months without treatment.

Urinary calculi are concretions which form from the crystallizable substances in the urine, and are met with in the whole course of the urinary passages. Their causes are but little known. They receive their name from the location in which they are found: as renal, calculi of the ureters, prostate, vesical, and urethral calculi.

Renal and calculi of the ureters occasion similar symptoms, and cause violent pain at times. Urethral and vesical calculi are the most common, and are more readily diagnosed, and may be extracted by surgical aid more successfully than most other forms of calculi.

Of the urethral calculi, the obstructions which they cause to the passing of the urine, the hard tumour, and the noise occasioned when struck by a sound or catheter indicates their presence. They are removed by forceps or incisions.

Of the vesical calculi, they sometimes proceed from the kidneys. Most commonly they are formed in the bladder itself.

Frequent attempts to pass urine, sudden stoppage to its flow, and bloody urine are the chief phenomena that induce a suspicion of their existence. We cannot, however, be certain of this without an examination per rectum.

There is no such thing, probably, as a medical solvent. A surgical operation is applicable.

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I will report a case of vesical calculi that I had in my practice and our mode of operating for it, original with me.

On April 18, 1900, Master Winfred Liffany, of Harford, Susquehanna county, Pa., brought to my place a white pacing gelding, very handsome, about eight years old, and weight about 1000 pounds. He was dribbling urine slightly and attempted to urinate every few minutes. He was slightly run down in condition. Master Liffany had traded for him only a few days before. Upon rectal examination I found a vesical calculi the size of a large hen's egg. This was the first, and has been the only one I have found thus far.

The boy wanted to know if I could remove it successfully. I told him I thought I could, and he left the horse with me. I deferred the operation until April 30th. In the meantime I tried, both in New York and Philadelphia, to obtain lithotomy forceps from the veterinary-instrument dealers, but was unsuccessful. I had by this time decided upon my plan of operation. With the assistance of Dr. J. G. Wilson, M.D., and Druggist Sidney Jenks, of Montrose, and my man-of-all-work, we cast the horse with the "Cockney" harness, having previously dieted him with bran mashes for twenty-four hours. I then made an entrance to the pelvic region of the abdominal cavity, the same as we do in the operation for cryptorchids, as follows:—with an ordinary castrating knife I made an incision in the scrotum large enough to pass my hand. With my hand I broke down the connective tissue and fascia, and with a slight rotary movement I passed my hand right up into the inguinal region, and when I had reached about two inches above the ring I broke through the peritoneum, which brought me in the pelvic cavity near the bladder. I located the bladder at once, and seized it with the calculi and brought them out of the opening into view; held them while my assistant, Dr Wilson, with suitable catgut, passed sutures in the muscular coat of the intending opening into the organ, leaving a loop above the point to cut through, being careful not to pass the needle through the mucous coat of the bladder.

With an ordinary scalpel we cut through the muscular portion under the loop of the catgut left for the purpose. We now shoved the muscles to one side as far as we could, and cut through the mucous coat and removed a stone weighing five ounces. We now sutured the mucous coat with fine catgut, one-fourth inch apart, and drew up the sutures in the muscular portion and tied them. We now let the organ return to its normal position and allowed the horse to regain his feet. He manifested pain for a couple of hours and strained, passing a little blood.

The next morning I let him out to eat a little fresh grass and watched him for half-an-hour, when he urinated very naturally and did not strain at the close, as he had done when carrying the calculi. I let him out for a little exercise and to eat fresh grass every day.

He improved rapidly. Passes a little pus at times. Sent him home, a distance of fourteen miles, May 14th, just two weeks after the operation. About four weeks from the time of the operation he strained and passed a little pus, but it lasted only two or three days, probably due to the sloughing of the sutures in the mucous coat of the bladder.

The horse was allowed to run at pasture for about three months. He gained in flesh and is in fine condition, and has been perfectly healthy since, doing all kinds of work. I see him frequently when in that vicinity.

(From the "*American Journal of Comparative Medicine and Veterinary Medicine.*")

CASTRATION.

BY E. WALLIS HOARE, F.R.C.V.S.

(*Continued from page 7.*)

THE next sequel to which we propose to draw attention is known as scirrhous cord, champignon, and sometimes as sarcocele. The latter term is objectionable, as it signifies a solid or flesh-like tumour or enlargement of the testicle.

The term "scirrhous," of course, must not be confounded with the form of cancer described by that name, as there is nothing malignant in the affection we are considering. Some observers recognise two varieties of scirrhous cord; one, of temporary duration, occurring a short time after castration, and disappearing spontaneously. The other, known as true scirrhous cord, is slower in growth, hard in consistence, and contracts firm adhesions to the surrounding parts; it may grow to a very large size, and may increase in an intermittent manner. Of late years this affection is believed by some authorities to depend on the presence of a parasite, the latter setting up irritation in the divided end of the cord and leading to the formation of the tumour. There is no doubt but that irritation, by whatever caused, is the leading feature in the condition. The changes found in the cord are increase in size, the formation of new tissue, increased vascularity, and a tendency to form adhesions to the skin and surrounding parts. The anterior or vascular portion is that chiefly affected, and in recent cases it is usual to find a cavity full of pus in the centre of the enlargement. Some cases remain quiescent for a time, but start suppurating without any warning; these are by no means uncommonly met with in adult and aged horses. In scirrhous cord of recent development the enlargement is comparatively soft in character, and the adhesions easily separated by the fingers.

As we have remarked in a previous article, the process commences by an inflammation of the structure of the cord, the divided end remains in contact with the scrotal wound, and is exposed to irritation from the hands of the attendant, and to septic influences; exuberant granulations form, and continued suppuration is present, the end of the cord assuming a cauliflower-like appearance. The animal walks lame, and drags the leg on the affected side; the flank is "tucked up" and tender on pressure, and the superficial lymphatics enlarged, while the general appearance of the animal is unhealthy, and condition is rapidly lost.

Now, even at this stage, by a process of absorption, or suppuration, or a combination of both, this abnormal condition of the cord may disappear gradually, and we meet a number of instances of this spontaneous recovery. In other cases the disease continues either in an enlargement of the cord, which at irregular intervals suppurates and may heal for a time, or a fistula of the scrotum results. In others the progress of the tumour is quicker, and an enormous enlargement occurs, hard in texture, firmly adherent to the skin, and rendering the animal unfit for work.

The treatment of scirrhous cord may be summed up in a few words, viz., early excision. Diligent fomenting and the internal and external use of potassium iodide may be tried in these enlargements of the cord that are soft and of recent duration. But we have to consider the chances of the diseased process recurring and proving very troublesome at a future date.

Besides, the process of absorption is a slow and tedious one, and few owners will take the trouble to carry out the treatment. Removal by the écraseur is a very simple operation in recent cases—the adhesions are slight and easily separated, and the chain of the écraseur is very easily applied. In more advanced cases the tumour has to be carefully dissected out and the cord exposed, the écraseur being very slowly worked in order to avoid hæmorrhage. After removal of the growth, we believe in plugging the cavity with carbolic tow until the following day, as secondary hæmorrhage is not uncommon in these cases.

Fistula of the scrotum is of course caused by the presence of a diseased cord, and the treatment consists of the free use of the knife, and the removal of the offending portion of the cord.

As regards the prevention of scirrhous cord, our experience teaches us that in some instances this unfortunate sequel still occurs in spite of all precautions. We would advise removing a proper amount of the cord when operating. Avoid dragging on the structure, and leaving any bruised tissue behind; see that the ends of the cord do not get into contact with the scrotal wound, and caution the attendant against rough handling. A paralysed condition of the cord is a fertile cause of the troublesome sequel we are considering; in some instances we have seen the divided end of the structure appear even outside the scrotal wound next day. This is most common in subjects out of condition, and, as previously remarked, the only safeguard is to remove a proper amount of the cord when operating.

Another sequel, which is not referred to in text-books as occurring after castration, is paraphymosis. We have met with it on three occasions, and were at a loss to ascertain the cause. Free scarification of the penis and sheath and tonic treatment proved successful.

Another sequel not usually referred to is a collection of fluid in the scrotal region. This usually occurs some time after the operation when the parts have healed. The enlargement very much resembles scrotal hernia, and in fact is often mistaken for this condition. It appears to be capable of retraction, and is larger sometimes than at others. It is globular in form, and the inguinal canal is usually dilated. We have operated on these cases by simply opening the sac and washing out the contents; these are sometimes of a cystic character. To differentiate this enlargement from scrotal hernia is by no means easy, as the contents feel like the presence of intestine, and the tumour can be "drawn up" by the animal at times. Examination per rectum, and the "coughing test," may lead us to a correct diagnosis.

We now propose to refer to some complications that may arise during the performance of the operation of castration. The operator must be prepared to meet these complications when they are presented. Adhesion of the testicle to the tunica vaginalis reflexa is very puzzling when met with for the first time. When the incision is made in the scrotum the testicle does not present itself as is usual. The adhesions must be separated by the fingers and the aid of the handle of the scalpel. In some instances a tedious dissection becomes necessary before the testicle gets liberated.

Descent of the omentum may occur during the operation of castration, but is more often met with after the animal rises. It can be readily distinguished from the intestine; the blood-vessels, which are apparent, should be ligatured, and the protruding portion of the structure excised.

Hernia is a very serious complication, and frequently a fatal one. It

usually makes its appearance after the animal stands up. We hear cases described from time to time of how easily the intestine has been replaced in such cases, but these we are inclined to take *cum grano salis.* The treatment consists in casting the animal, placing him under deep anæsthesia, and, fixing him on his back, the protruding intestines should be thoroughly cleansed with an antiseptic solution, and carefully returned to the abdominal cavity, and the external ring and skin, with the operation wound, sutured as deeply as possible. Needless to say this process is far easier described than performed. When the animal recovers from the anæsthetic, we believe in administering an opiate to ensure quietude of the intestinal canal and of the animal himself. Of course no solid food should be allowed, and as little movement of the patient as possible be permitted.

It seems hardly necessary to refer to a condition in which one of the testicles is found in wrong position in the scrotum, *i.e.*, its position reversed, so that the vascular portion of the cord is placed posteriorly. This is very commonly met with. Of course no error is likely to be made in securing the wrong portion of the cord if the appearance of it be observed, and the position of the epididymis be noted. Nevertheless to the beginner, for whom our remarks are intended, the point may be of some importance.

We do not intend to discuss the question of the castration of cryptorchids further than to remark that we come across many instances incorrectly described as "rigs," in which the testicle is found in the inguinal canal. All that is necessary is to make an incision over the external abdominal ring with a hooked knife, insert the fingers, and if necessary the hand, and take hold of the missing organ. The shortness of the cord in some cases makes it requisite to employ the ècraseur to remove the organ. Careful manipulation in some of these cases will enable us to feel a portion of the epididymis before making the incision, and so make sure that the testicle is in the canal. Indeed, in many instances in which it is almost impossible to get the testicle into a proper position for the incision, we prefer to open the scrotum with the hooked knife, insert the fingers, and seize the organ. This is far better than making a chance incision wherever the testicle can be seized.

In conclusion, we wish to draw attention to the injustice done to the profession by travelling gelders and unqualified persons in this direction. Castration is a surgical operation, and should only be performed by the qualified veterinary surgeon. It behoves the newly-fledged graduate to become expert in this operation, and the only means of securing this proficiency is by actual experience. Let him first of all assist at a number of castrations, and he will gain more knowledge than any amount of theory on the subject can teach him.

INJURIES CAUSED BY ILL-FITTING SADDLERY AND HARNESS.[1]

BY JOSHUA A. NUNN, VETY.-LIEUT.-COLONEL.

I HAVE been asked by your President, whom I may claim as an old friend, having known him since the age of five, and his father before him, to read a paper before your Society, and it is a real pleasure for me to do so, as it

[1] Read at the Summer Meeting of the Lincolnshire Veterinary Medical Society on June 19, 1902.

was in your county, under the guidance of your President's late father, that I received my first practical acquaintance with our profession. I use the term practical, for although I have been bred up amongst animals and have ridden and hunted since I was a child, as most Irishmen have, I knew nothing of the veterinary profession till I had seen the rough and smooth side of a busy practice. I speak somewhat strongly on this point, as I laboured under the common delusion of the majority of Englishmen, that I knew all about it; but before I had been with the late Captain Russell a month I found I knew nothing, and after a quarter of a century I find I can learn something useful every day.

When I was asked to read this paper I was somewhat at a loss to determine on a subject, but finally selected this—namely, "Some Harness and Saddle Injuries." I feel I owe an apology in bringing such a matter before you, as, strictly speaking, it is not one within the scope of veterinary science, but nevertheless to my mind it is an important one, and one that amongst a certain section of our brethren it is, I am afraid, the fashion to ignore and look down upon.

Gentlemen, we all of us aspire to be successful, and in this world to 99 per cent. of its inhabitants success is spelt by "money," and in our own profession I maintain to be successful we must not only be scientific practitioners but horsemen, and be able to show the horsey owner that we know as much and a little more of horse matters than he and his confidential stud-groom put together, and that we can occasionally teach the latter worthy a trick or two at his own calling. It is my experience that such little things give the public confidence in the professional man, and although such matters may not be directly profitable they are the bait that brings the big fish to the net, and I therefore consider an acquaintance with the calling of the saddler is of as much importance to us as that of the blacksmith.

Into the construction of saddles and harness I will not enter, as you are acquainted with these matters, but will at once go on to describe the various injuries caused by ill-fitting and faulty parts. Before entering into detail I will remark that certain faults in the gear produce certain injuries, and that a person conversant with such can almost at a glance tell where the fault lies.

In the proper fitting of a saddle the true secret of success is that the whole of the weight-bearing portion should accurately correspond to the surface of the back, or in other words that the whole of the weight-bearing surface should be utilised. As you are well aware, a saddle cannot be put far forward on the withers, or it will pin in and interfere with the motion of the shoulder blades, causing the horse not only to go short and pottering, and to stumble, but also very likely cause abrasions on the sides and top of the withers from the points of the tree and gullet plate. Also the saddle cannot be put far back on the loins, as the part is not adapted to carry weight, and the large propelling muscles would be interfered with. It therefore follows that there is only a limited space in the length of the back available—a weight-bearing surface of about 22 inches, and this is further reduced if we remember that it is only the flat surface of the rib between the back bone and curve that can be made available. If this is remembered, it can be realised how important it is that every available portion of the bar of the saddle should carry its due proportion of weight.

A position in which an abrasion is seen is on the centre of the spine just under the cantle, and although it may be caused by the cantle plate, in

the majority of cases I think it is due to too short a saddle, the weight of the rider coming right back on the cantle. It is aggravated by the motion of the horse wrinkling up the skin of the loin at every step he takes, and this being forced against the saddle, which is pressed downwards by the rider's longer ingives rise to an abrasion. The obvious remedy is to use a saddle weight, the tree.

Both longitudinally and transversely across the bars on the under surface pieces of webbing are fixed—the webs of the saddle. There is considerable art in adjusting these, and it is a long process, as if not properly done they will stretch and allow the weight of the rider to come on the centre of the back bone, where the tops of the vertebral spines are only covered with skin, and the certain result is a sore.

At the side of the swell of the tree a pad, the bellies are fixed, over which the upper thighs of the rider come. If not properly stuffed a wound will be caused over the swell of the last two or three ribs. Although not important to the horse, the proper fitting of the bellies is one of some importance to the comfort of the rider, for if not adjusted to his seat and length of thigh it will cause him to sit in an uncomfortable position either too far forward or back. This will not only give rise to an annoying chafe on the inside of the thigh, but if he rides over a fence is extremely likely to cause sprain of the rider's muscle, a serious injury that has put an end to many a good man's hunting days.

Under the pommel or head of the saddle is an arched piece of steel—the gullet plate. Owing to the wedge shape of the withers and the weight of the rider pressing the V shape of the saddle down on it, there is almost more strain on the gullet than elsewhere, and it is highly important that the plate should be of good steel. In some military saddles some years ago this was made of iron, and the result was that under the strain the tree spread and came down on the top of the withers, causing a gall. It is a matter of some controversy whether the head should be straight or cut back; both have been in fashion and both have their advocates. The straight head is the strongest and is further away from the rider's fork if by accident he is pitched forward. The cut back is perhaps not so likely to injure the wither if he "comes down," and it is a favourite with some dealers, as it shows off the slope of the shoulder better.

It is important that the points of the tree should not be too narrow, or they will press on the sides of the wither just below the upper and posterior angle of the scapula, and a gall will be caused in that situation. In fact all the weight should be taken on the part below the junction of the bars, none above it. If the sides of the shoulders are pressed upon or pinned in, not only will there be a gall, but free motion is interfered with, and the horse is stilted in his action and likely to stumble. I have proved this many times over in the case of troop horses. A military saddle has the bars prolonged in front of the fore arch or gullet into "burrs" designed to carry the wallets, and which of necessity press on the top of the shoulder blade, and I have frequently found that horses that trip and stumble in a military saddle go safely in an ordinary hunting one. I give you the hint, gentlemen, that when consulted as to a horse stumbling it is advisable to look at the saddle and gear as well as the shoes, as this is a point often forgotten.

The bars are, or should be, made of seasoned beechwood, but from a variety of causes they may be bent or distorted, what the saddler terms "cast," in either a downward or upward direction. If cast up, that is to

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say the ends being turned upwards, the lower surface of the bar will be too curving, and all the weight will be taken on the centre, a sore will be the result over the swell of the middle ribs; if in the other direction all the weight will be on the ends and a sore made at the side of the wither at the point of union between the bar and gullet and over the swell of the last three or four ribs.

A troublesome sore is often seen on the off side of the wither from a side saddle. From the position a woman naturally leans to the near side, and being seated higher above the back than a man there is naturally more play; furthermore all this is aggravated if the lady is not a good horsewoman and cannot sit square; the saddle is naturally drawn over to the near side and the point of junction of the bar and gullet on the off presses against the side of the wither. I have found that a broad racing surcingle passing right over the seat of the saddle will greatly help to steady it even with an indifferent horsewoman; but as it is not the fashion to use them, I suppose it is useless to suggest them to our lady clients, especially if they discovered that in it there was a reflection on their horsewomanship.

These, gentlemen, are the chief injuries from the saddle itself, and I will finish this portion of the paper before I go on to speak of others due to certain portions of gear.

All that I have mentioned are caused by the tree not being properly fitted, or in other words by it not being adapted to the lines of the back. Now, no doubt, to a certain extent, these defects can be remedied by properly adjusted stuffing; still this is objectionable. The stuffing and pannels should be looked only as a cushion to prevent injury from the hard tree, and should be no thicker than is necessary for this purpose; if they are, not only is the weight increased, but the rider, being high above the back, does not get a proper grip and firm seat, but the saddle will roll about to a greater degree even with a good horseman.

In these injuries a common device to prevent recurrence or to work the horse is to "chamber" the saddle. To be effective the stuffing must be fairly thick. If it is not, the centre of the chamber will touch the sore. The hollow must also be of a considerable size, which is a point that most saddlers overlook; and above all things it must be made exactly over the injured spot. The usual practice is to put the saddle on the horse without girthing it up, then raise it up and make a mark where it is presumed it will touch the sore, and hollow it out. The result is not usually satisfactory, and it is easily proved by any one who takes the trouble that it is extremely difficult by the eye alone to hit the right spot off.

When it is desired to chamber a saddle the abraded part should be surrounded with a ring of some coloured substance, such as soot and vaseline, and the saddle put on and girthed up by the person who is in the habit of doing it. The rider who has given the sore back should then mount the horse and move him off a few steps; when the saddle is taken off the offending spot will be marked clearly, and will be found as a rule not to be in the place that would have been fixed upon by the eye only. After the chamber has been made the same process should be gone through, and if the hollow is not soiled the work can be looked upon as satisfactory.

In fitting a saddle for any alteration it is important that the person who is in the habit of doing so should put it on, for in many cases faulty or careless saddling is all that is at fault; also that the person who is in the habit of riding the horse should mount him, as there is a great difference in men's seats.

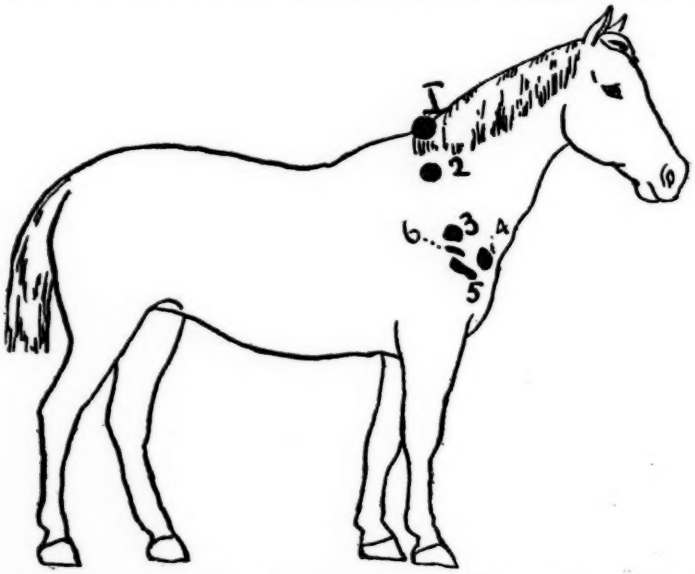
If the pannel is thin and the rider grips close, the buckle of the girth may give rise to a gall. The best plan in this case I have found is to use a long girth strap and short girth, so that the buckle comes down below the edge of the flap away from the pressure of the leg. The girth, if a web one, can be shortened by stitching a fold or tuck in it, but there ought to be a leather tongue under the buckle to protect the skin.

Some horses, particularly slab-sided ones with pinned-in elbows, will girth-gall in spite of every contrivance. In England web girths are generally used, and in this case the substitution of a Cape raw hide or a split leather girth will often overcome the difficulty, especially if one or more of the strands be tied back so as to be clear of the sore place. In case of necessity it is possible to work the horse with one girth fastened to the D to which the breast-plate goes, the other to those on the belly of the saddle. Such a contrivance is, of course, not very secure, and is somewhat unsightly. The old contrivance of a piece of sheepskin sewn to the girth is effective, but it is often put on and neglected, the wool getting rubbed into a hard mass. It should be carefully dried after use and frequently combed and brushed. I have found a soft piece of numdah answer as well, and is not so unsightly.

If the breast plate is too tight galls will take place between the fore legs, particularly if the horse is galloped. The obvious remedy is either to leave the breast plate off or to loosen it. It is, of course, only caused by great carelessness, but nevertheless I have been before now consulted about such things. In such a case it is absolutely necessary that the man who usually saddles the horse should do so, otherwise it would be almost impossible to find out what was wrong.

I will now go on to speak of harness galls, which, to the majority of us, are more interesting than saddle. It is an important point to remember that a saddle gall is caused by pressure, a collar gall by friction. In progressing, one foot and the corresponding shoulder, at whatever pace the horse is going, is in advance of the other, and it is only when standing still and "square" that the two shoulders are symmetrical; the result is that the collar is always oscillating from one side to the other. This can be proved by putting one on a horse and walking him past you, when the movement will be easily observed. The rules for fitting a collar are the same as for a saddle, viz., that the whole of the bearing surface should be utilised, and that it should coincide with the curves of the neck. When the way the collar moves is taken into consideration the reason for this accurate adjustment is obvious, as if only one point is bearing on the surface, not only will all the pressure be concentrated on it, but the collar, resting as it were on a pivot, will oscillate to a dangerous degree. This gives rise to undue friction, and a gall is the result. Collars can be too long and too short, too wide and too narrow; the terms speak for themselves, and the whole secret of fitting one is to hit off the happy medium, so that it fits close enough to avoid oscillation and friction, but not so tight as to pinch. In adjusting the length, remember that as the horse throws his weight into it the collar rises, so sufficient space must be left that the bottom will not impinge on the windpipe. When on, the collar should fit nicely and evenly —if it has to be forced down it is certain that in some place it is too narrow. If it see-saws a great deal it will have too much stuffing in the centre, and not enough above or below; to test this, hold it steady at the top and move it from the bottom, where there should not be play of more

than two inches from side to side over the shoulder joints—if there is, it is too wide. At the bottom there should be space enough to admit of the fingers being inserted between it and the skin. I mentioned that the whole bearing surface should be in apposition to the skin, also that injuries were the result of friction. To this latter rule there is one exception, viz., if the top of the collar rest on the neck a troublesome pressure sore will be caused. (No. 1 in the drawing.) This was noticed some years ago amongst the London Fire Brigade horses that are kept ready harnessed, the weight of the collar causing injuries of this nature. In old collars that get flat the



edge of the after whale is likely to make a sore. (No. 5 in the drawing.) [I have made a rough drawing which will show at a glance where the different kinds of ill-fitting collars cause galls.]

The top of the wither, at the spot where I mentioned a sore would take place from the collar hanging on it, is also liable to injury if the horse is used in double harness, by the pole chains being too tight and dragging the collar on to it. This can be avoided by stuffing the collar well below, so that the top will not come in contact with the wither; metal shields are also used for this purpose and answer well, but the objection to them is that they are liable to be bent and broken, and if put on in this condition will injure the neck more than the collar. The injury marked No. 2, on the upper part of the shoulder blade slightly to the front, comes from too tight a collar, and either some of the stuffing should be taken out or the collar stretched. It should, however, be remembered that if it is stretched it is shortened in a corresponding degree. Too loose a collar will cause injuries at 3 and 4, and as a rule it is found at the centre of draught where the trace joins the collar. The true shape of the collar that causes this

will not be seen till the traces are tightened, as when slack the collar rides forward. If a complaint is made about a collar I think it is almost more important to see it on the horse than a saddle, and he should be put into a trap and made pull. It is no use looking at the collar hanging round his neck to find out what is wrong, as I have seen done before now on many occasions.

These are some of the more important injuries caused by saddlery and harness, but the list is nothing like complete, and the matter of bits and bridles I have not touched upon, as it is a subject in itself.

I trust that a good discussion will arise, as I am convinced that it is a matter that as a profession we have neglected.

THE INTERCOMMUNICABILITY OF HUMAN AND BOVINE TUBERCULOSIS.[1]

BY MAZŸCK P. RAVENEL, M.D., BACTERIOLOGIST OF THE STATE LIVE-STOCK SANITARY BOARD OF PENNSYLVANIA.

From the Laboratory of the State Live-stock Sanitary Board of Pennsylvania.

(*Continued from page* 42.)

Calf No. 26563, weight 165 pounds. The first inoculation was made on September 6, 1901, and thereafter weekly until December 16, 1901, when an interval of nineteen days was allowed to elapse, the inoculations being resumed on January 4, 1902. The method of inoculation was the same as for Calf No. 26562. Death took place January 22, 1902, the total amount of the suspension of the culture given being 1400 c.c. The condition of the animal following the injections correspond closely with Calf No. 26562, its survival being somewhat more prolonged.

Autopsy.—Weight 186 lbs. Considerable emaciation. The lungs were firm and non-elastic to the touch. The points of inoculation could not be detected either in the pleuræ or in the lungs, except at one point where a small pus cavity, 1 cm., was found near the surface of the right lung, the pus containing many tubercle bacilli. No distinct nodules could be found in either lung, but both were much increased in solidity throughout, though sections would float in water. The bronchi were filled with a tenacious mucus. The pleuræ were roughened by bands of fibrin, which extended to the lung, attaching the inferior borders especially to the chest-wall. The bronchial and mediastinal glands were much enlarged, and the latter contained many caseous nodules. In the abdominal cavity all the organs were attached to the peritoneum and to each other by bands of fibrin. The liver was firmly adherent to the diaphragm. Over the surface were fifty to sixty whitish flat nodules, 5 mm. to 10 mm. in diameter, some of them extending deeply into the substance of the organ. On section caseous areas were seen.

The spleen and kidneys showed slight changes only. The parietal peritoneum was rough at many points and had fringes of fibrin attached to it. Scattered over it were a large number of grey nodules, 2 mm. to 5 mm. in diameter.

[1] An address delivered at the Annual Conversational Meeting of the Pathological Society of Philadelphia, on Thursday evening, April 24, 1902.

Microscopical examination showed no well-defined tubercles in the spleen and kidneys. The liver showed many areas of necrosis. In the lungs were masses of conglomerated nodules, most of which did not show marked central caseation. Numerous giant cells were found. The alveoli are filled with desquamated epithelium, leucocytes, and epithelioid cells. There is a marked bronchitis.

Calf No. 45020, six months old. On December 23, 1901, 8 c.c. of an emulsion made from the bronchial gland of Calf No. 26562 was injected into the left lung, and the same amount into the peritoneal cavity. The emulsion showed many tubercle bacilli. By January 15, 1902, the calf was markedly ill, and breathing was increased in rapidity. These symptoms increased steadily, the temperature ranging from 104° F. to 105.5° F. About February 1st the temperature began to fall, and at the time of death, February 9th, was subnormal.

Autopsy.—Much emaciated. Both lungs were a dark red, and were thickly sown throughout with miliary nodules. The left lung was adherent to the chest-wall over a large part of its surface. On separating it many tubercular new-growths were seen, between which the pleura was smooth. At the point of inoculation was an abscess cavity 4 cm. in diameter. The pus contained many tubercle bacilli and staphylococci. On the lung over the abscess, and binding it lightly to the chest-wall, was a layer of fibrin, of cream-white colour. Along the backbone was a chain of enormously enlarged glands fitting into the spaces between the ribs, and extending from the first rib to the diaphragm. These were filled with caseous areas. The mediastinal glands were enlarged and showed many caseous areas. Most striking was the condition of the omentum, which had been converted into a mass of tubercular new-growth, made up of conglomerate nodules. It varies in thickness from 1 cm. to 3 cm. The nodules are greyish-yellow, fibrous, and show central caseation. The liver shows numerous yellowish nodules both on the surface and on section.

The spleen has on its surface a number of flat, fibrous new-growths, but no nodules are seen on section.

The kidneys are normal in appearance, but a few nodules appear on section.

Microscopical examination shows the lungs to be thickly sown with minute tubercles. Sections stained with carbol-fuchsin show innumerable tubercle bacilli clustered mainly in these nodules. The liver contains many necrotic areas in which many tubercle bacilli are found. The spleen contains a considerable number of necrotic areas. The flat new-growths are tubercular. The kidneys show only a few tubercles, which contain innumerable tubercle bacilli.

Calf No. 45035, aged nine weeks, weight 130 pounds. February 11, 1902. Inoculated into its right lung and peritoneal cavity with an emulsion made from the omentum of Calf No. 45020, 5 c.c. being injected into the lung, and 8 c.c. into the peritoneal cavity. The temperature rose on the day after the inoculation, and reached 107° F. on the third day, after which it fell, and ranged from 104° F. to 106° F. until a few days before death, when it fell slightly, going as low as 101.4° F. on the day of death. Breathing had become laboured ten days before death, and the appetite failed a week before death, which took place March 6th.

Autopsy.—Weight ninety-seven pounds. Condition fair. The right lung adherent to chest-wall throughout. When separated a layer of fibrin containing many tubercular masses of new-growth is seen. At the point of

inoculation is an abscess cavity 4 cm. in diameter, the pus containing many tubercle bacilli and a gas-forming bacillus of the colon group. Both lungs were filled with a multitude of minute nodules, and some areas showed extensive caseation. The mediastinal and bronchial glands were much enlarged and caseous.

The liver, spleen, and kidneys were normal in appearance.

The omentum contained a very large number of discoloured, reddish areas, which were thickened, hard, and of sandy feeling.

Microscopical examination.—The lungs are studded with minute tubercles. The liver contains many small areas of necrosis. The spleen shows a number of areas of commencing necrosis. The kidneys are normal.

Calf No. 45047, aged six weeks, weight seventy-two pounds. Inoculated March 7, 1902, with an emulsion made from the lung and bronchial gland of Calf No. 45035, 5 c.c. being injected into the right lung and 5 c.c. into the peritoneal cavity. The temperature rose to 104.8° F. to 106° F. for ten days, then fell slightly until death took place on April 1, 1902.

Autopsy.—Weight sixty-five pounds. Considerable emaciation. Both lungs are studded throughout with miliary nodules. The right lung is firmly attached to the chest-wall for its entire surface, and at the point of inoculation is an abscess 4 cm. in diameter, which contains a milky fluid pus in which are curdy masses. The pus contains many tubercle bacilli and other bacteria, but no streptococci. The left lung is attached to the chest-wall for a third of its surface. Over the unattached surface is a layer of fibrin 1 mm. in thickness. The chest-wall corresponding to this fibrin is thickly studded with minute grey nodules. The pericardium is attached to the lung. The heart shows numerous yellowish tubercles scattered over the ventricles, as well as the auricles, and especially numerous on the auricular appendage. They are seated in the visceral layer of the pericardium.

The bronchial and mediastinal glands are enlarged and soggy, but no nodules can be found.

The omentum contains innumerable minute pearly nodules, and many red, fleshy, highly vascular new-growths.

The mesentery of the large as well as small intestine contains innumerable pearly nodules. The mesenteric glands are normal in size and appearance. Along the abdominal aorta and brim of the pelvis are twelve to fifteen glands from 5 mm. to 15 mm. in diameter, yellow in colour, but none caseous.

The liver is adherent to the diaphragm. On the surface, as well as on section, many yellowish nodules can be seen.

The spleen is thicker than normal and very firm. On the surface a few fibrous new-growths are seen.

The kidneys appear normal, but each has a layer of the peritoneum attached to it, which contains innumerable grey nodules averaging 1 mm. in diameter.

Microscopical Examination.—Lung not examined. The liver contained many minute areas of necrosis. The kidneys contain a considerable number of minute tubercles, with central necrosis, situated for the most part immediately under the capsule.

Another animal was inoculated in the same manner with the tissues of this calf, which is still living.* Guinea-pigs have also been inoculated in

* This calf No. A45073 died three days after the reading of the paper, or twenty-four days after inoculation. There was typical and extensive tuberculosis.

order to recover a pure culture, so that any changes that have taken place may be studied. We feel, however, that we have demonstrated a great increase in virulence in this culture obtained from sputum by the several passages through calves.

Our own experiments, as well as those quoted from others, demonstrate that Koch's statement that human tuberculosis cannot be transmitted to cattle is erroneous and untenable.

II. In the second proposition Professor Koch calls in question the possibility of the transmission of tuberculosis from cattle to man, and holds that if such transmission ever does take place it is a very rare occurrence, so rare, indeed, as to render superfluous any measures of precaution against it.

In the solution of the problems here involved we are of necessity deprived of direct experimental data, so must gather evidence from every possible source, collate and weigh it carefully, in order to draw fair conclusions.

In the first place, we may well ask if tuberculosis in cattle is marked by any specific features which differentiate it from tuberculosis in man, and which would make it improbable that the two were intercommunicable. I will not attempt here to go into a discussion of all the forms of bovine tuberculosis or to compare it minutely with the disease in man. The chief differences are: (1) The marked tendency to calcification rather than the caseation seen in man; (2) the formation of extensive new-growths in the serous membranes, such as the pleuræ and peritoneum.

These growths assume wart-like, or cauliflower, or grape-like shapes, from which the names "perlsucht," "pearly disease," "pommelière," and "grape disease," as applied to bovine tuberculosis, are derived.

In cattle, as in man, the lungs are the chief seat of the disease. In about half of all cases the lungs and serous membranes are simultaneously affected; the lungs alone in about one-third, and the serous membranes alone in about one-fifth.

Since 1863 Virchow[19] has insisted that the two tuberculoses were distinct, an attitude reaffirmed by him in his latest publication, his chief point being that we cannot call anything tuberculosis which does not show the true histological tubercle, whether or not the tissues contain tubercle bacilli and show changes due entirely to them. Although insisting so strongly on this distinction, which is not held by all pathologists, Virchow does not accept Koch's conclusions, and says that in the post-mortem examinations at the Charité several cases have been found showing an unusual peritoneal tuberculosis, with enormous growths such as are seldom seen in man. These cases he regards as being possibly of bovine origin through food.

The histological identity of human tuberculosis and pearl disease was first demonstrated by Schüppel,[20] and his work has been supplemented by Baumgarten,[21] who has observed characteristic caseation such as occurs in the human tubercle, take place in the nodules of pearl disease, "in a typical form and with like regularity." The process is often obscured by rapid calcareous changes which, he justly remarks, are terminal, and have nothing to do with the actual disease, and which, furthermore, are often seen in human tuberculosis. On the other hand, it has repeatedly been shown that typical miliary tuberculosis can be produced in cattle by the bovine bacillus, and as seen in the specimens before you the same result

may be brought about at times by the human bacillus. In fact, experimental tuberculosis in cattle induced by inoculation with the bovine tubercle bacillus is usually of the miliary type, and only exceptionally assumes the form considered typical of the natural bovine disease. In this connection Hueppe[22] very aptly calls attention to the fact that Koch in his experiments with the bacilli of bovine tuberculosis produced in cattle "only tuberculosis, but not the tuberculosis of the pleura peculiar to the ox—the so-called perlsucht; his experiments, therefore, in the sense of his special interpretation, did not even prove that bovine tuberculosis affects the ox." It has further been shown by Troje,[23] and by Dr. Theobald Smith,[2] that pearl disease may be produced in rabbits by the human tubercle bacillus. Troje has observed one case of pearly disease affecting the pleura in man.

The differences noted between tuberculosis of man and tuberculosis of cattle are scarcely greater than those noted between the latter and tuberculosis of swine, yet nothing is easier than to infect swine with the milk or other products of tuberculous cattle. The infection here is by natural methods, and in fact is most often noted where nothing was further from the wishes or intentions of the unconscious experimenter. The origin of the infection is unquestionably bovine, yet the disease produced differs markedly, but not essentially, from that seen in cattle. The evidence then leads us to conclude that such differences as are commonly seen between human and bovine tuberculosis are in no sense essential.

Bacteriological evidence. Morphology and cultured characteristics of human and bovine tubercle bacilli.—That there were certain differences to be observed in cultures of the tubercle bacillus isolated from man and from cattle was shown by Dr. Theobald Smith in 1896, who confirmed his first observations in 1898, his human cultures being almost always obtained from sputum. A study similar to Dr. Smith's has been carried on at the laboratory of the State Live-stock Sanitary Board of Pennsylvania for several years, the material for the cultures being obtained from divers sources. With one exception, which was isolated from sputum, all the human cultures have been obtained from internal organs, especially the lungs and mesenteric glands. Two of the bovine cultures have been found in milk, the others coming from internal organs or glands. The result of our observations, which have agreed closely with those of Dr. Smith, is as follows:—The morphology of the bacilli in cultures of bovine origin is more uniform and constant than in cultures from man. The bovine bacilli are thick, straight, and short, seldom more than 2μ in length, and averaging less. In the early generations many individuals are seen which are oval, their length not more than double their breadth. They stain evenly and deeply with carbol-fuchsin, beading being almost always absent from young cultures, and often from old ones.

The human bacilli are, as a rule, much longer from the start, and tend to increase in length at once in sub-cultures. They are generally more or less curved, some cultures showing S-shaped forms. They stain less intensely with carbol-fuchsin, and beading is generally seen even in early growths.

The above characteristics are most marked and most persistent in cultures grown on blood-serum. On glycerin agar, glycerin bouillon, and glycerin potato the bacilli from the two sources approach each other in cultural features and morphology much more closely, and by continued

cultivation the differences tend to become obliterated. Bovine cultures are more difficult to isolate than human, are apt to grow as discrete colonies in the first culture, and for several generations are likely to grow in an exceedingly thin layer which resembles ground glass closely. The optimum temperature as well as the thermal death-point are practically the same.

The human bacillus, as a rule, grows more easily and abundantly from the first, and will grow well on glycerin agar in sub-cultures made directly from the original growth on blood-serum. All attempts to obtain a like result with the bovine organisms have failed.

The morphological distinctions tend to disappear also in the tissues of susceptible animals. We may inoculate a typical bovine culture, and in a very short time scrapings from the various organs will show long and very much beaded bacilli.

The most striking dissimilarity is, however, seen in the action of the bacilli from the two sources on animals. By whatever method of inoculation, the bovine bacillus, as a rule, possesses a very much greater pathogenic power than the human bacillus for all animals on which it has been tried, the only exceptions being possibly those animals, like guinea-pigs and swine, which are so extremely susceptible to both types that it is hard to draw any distinction between them. This was the case with swine inoculated by feeding in our own experiments, but Koch and Shütz found that for swine also the bovine bacillus was much more active. The list of animals for which this increased virulence has been proven includes horses, cows, asses, sheep, goats, dogs, cats, rabbits, guinea-pigs, and recently the same thing has been shown to hold true for man's relative, the monkey, by de Jong,[13] de Schweinitz and Schroeder,[24] and ourselves.

In our own experiments two monkeys inoculated subcutaneously with culture L, obtained from milk, died on the thirty-seventh and thirty-third days, while the corresponding pair of the same species, and as nearly the same weight as possible, inoculated with culture M, from human sputum, lived fifty-four and ninety-six days respectively, the last being chloroformed in a moribund condition. Two other monkeys which were inoculated by feeding five times with the same cultures smeared on banana, lived forty-two and ninety days respectively. The post-mortem examinations showed for the animals which received the bovine cultures a more active invasion and more acute process.

What has been said concerning the greater pathogenic power of the bovine organism has, I think, been proven beyond question to be the rule. It must be borne in mind, however, that what we speak of as virulence is a very variable quantity, no micro-organism being known which always shows the same degree of pathogenicity. The tubercle bacillus isolated from cattle varies in its pathogenic power considerably, though not perhaps to such an extent as those obtained from human sources. Among the latter we find some cultures which have feeble action even on the most susceptible animals, like guinea-pigs,[25] while others are most actively virulent. Besides culture BB, described in this paper, cultures of exalted virulence have been isolated from man by Vagades [26] and Lartigau.[27] Whether or not these cultures were in reality the bovine organism which had infected man we cannot say now. At present our knowledge is so restricted in the matter of differentiation that we must designate the cultures, human or bovine, according as they are isolated from man or from cattle. The

dictum of Koch that inoculation of cattle will infallibly distinguish one from the other cannot be accepted off-hand, as it is far from proven that virulence for cattle is a fixed and constant characteristic. Professor M'Fadyean[28] says:—"If a low degree of virulence for cattle is to be taken as the distinguishing feature of human bacilli there will be no difficulty in proving that the human disease is sometimes transmitted to the lower animals."

Has the bovine tubercle bacillus more pathogenic power for man than the human bacillus? In trying to interpret the results obtained by inoculation of animals we are forced to ask ourselves whether or not they are applicable to man also? Having proven that for practically all experimental animals the bovine tubercle bacillus possesses, as a rule, a much greater pathogenic activity than the human, is it fair to conclude that this increase of virulence will hold good for man also? Until the contrary is proven, or until good reason for believing the contrary is shown, I feel that this must be our conclusion. This matter opens up a most fascinating field for speculation, in which we meet with many apparent contradictions; and until we gain a better understanding of immunity in general we cannot speak dogmatically, but must stick to ascertained facts in each individual case. Virulence is a factor which is relative to the subject, and exaltation of virulence for one species of animal does not necessarily prove an increased power for other species. Indeed, the reverse is sometimes true. For example, the streptococcus is said to become increased in virulence for mice by successive passages through these animals, but less virulent for rabbits. So, too, the bacillus of "rouget du porc," though but slightly pathogenic for rabbits, rapidly acquires a high degree of virulence for them by successive passages; but when this has taken place we find that all virulence for swine, from which it came in the first place, has disappeared. Large doses do not even make them ill.

Admitting freely all these facts, we must regard them as exceptional, for it is a firmly established rule in bacteriology that when the virulence of a pathogenic organism is increased for one animal it is increased for all that are naturally susceptible to its action as well as for those in which the disease is known only experimentally.

That as regards man a result analogous to that seen in the streptococcus, or the bacillus of "rouget du porc," has not taken place by the residence of the tubercle bacillus in the tissues of cattle is proven by the cases of accidental inoculation of man with the bovine bacillus as well as by the cases observed clinically in which tuberculosis has followed the consumption of tuberculous milk. The tubercle bacillus is unique in the extent of its pathogenic activity, both by direct experimental inoculation as well as by infection under what may be considered more or less natural conditions. The list of animals in which tuberculosis occurs in parks and zoölogical gardens is appalling, the discoveries of Dubard[29] and others showing that not even the cold-blooded animals are exempt from this universal scourge. While it may be said of the tubercle bacillus that in cultures in the laboratory it is unusually tenacious of its characteristics, it is certain that in nature it has a wide range of adaptability as a pathogenic agent. Hence, for the tubercle bacilius, perhaps, more than for any other known microbe, we are justified in believing that an exaltation of virulence for practically all experimental animals will hold good in the case of man also.

XUM

Accidental inoculation of man with the bovine tubercle bacillus.—While we cannot determine the virulence of the bovine tubercle bacillus for man by direct inoculation, we are, nevertheless, not without some information on this point, owing to the accidental inoculation observed from time to time. Four such cases have been reported to this Society, accompanied in three instances by the exhibition of the specimens.[30]

Similar cases have been reported by Tscherning[31] and Pfeiffer,[32] the latter ending in general infection and death.

Dr. M. B. Hartzell[33] has also observed two cases in which the bovine origin of the infection was not absolutely proven, though certainly highly probable, both occurring in healthy men who were employed by one of our large railways to clean and repair cattle cars. In both a well-marked tuberculosis of the skin of the verrucous type followed slight wounds of the back of the hand inflicted by broken timbers. One man recovered under local treatment, but the other died after about a year through involvement of the lungs and other organs. This patient was a robust man, aged forty-four years, weighing 175 pounds, with good personal and family histories. Dr. Hartzell felt that he was able to exclude with reasonable certainty any other source of infection. The death of Mr. Thomas Walley, Principal of the Royal Veterinary College of Edinburgh, is also attributed to infection gaining entrance through a wound received while making an autopsy on a tuberculous cow.

The interest which has been aroused by Professor Koch's paper has brought out numerous reports of such cases, which are now being published to show that man has something to fear from bovine tuberculosis.

Dr. Kurt Mueller,[34] a surgeon of Erfort, describes the cases of two healthy young men who were under his care. Both were butchers, and in both cuts were sustained while working on tuberculous cattle, the wound opening the synovial sheath of a tendon in the hand. In each case an operation was necessary, and it was found that the wall of the sheath, as well as the tendon itself, were thickened, while upon them were large numbers of yellow nodules, proven to be tubercles by microscopical examination. These tubercles were placed very thickly near the scar, gradually becoming fewer as the scar was left. In one of the men the trouble extended from the finger to the forearm, and there was some evidence of tuberculosis even at the muscular attachment of the tendon. In the second case the tendon was attached to the sheath, and the disease limited to an area 10 cm. in length. Examination of the removed tissue proved the presence of tubercle bacilli. Both of these men had good family histories, and were free from tuberculosis elsewhere, so that Dr. Mueller has no doubt that they were inoculated with bovine tubercle bacilli.

De Jong[13] observed the case of a man who injured his finger while examining the mesentery of a tuberculous cow. The wound did not heal, the edges became indurated, and considerable swelling ensued, with pain which increased steadily and failed to yield to ordinary treatment. Curettage and cautery were finally used with success. In the scrapings tubercle bacilli were demonstrated.

In Berlin[35] two men who are employed in the slaughter-house to carry the condemned tuberculous meat to the place where it is destroyed have developed tuberculosis of the skin of the hands. At a recent meeting of the Medical Society of Berlin Professor Lassar[36] presented cases of

verrucous tuberculosis of the skin. He had observed this type of skin tuberculosis in butchers who had handled tuberculous meat. Of thirty-four cases seen by him four were in butchers; while on the contrary, among those affected with other forms of tuberculosis localised to the skin of the hands, none belonged to this calling. Liebreich agreed with the view taken, and said he had been able to assure himself that verrucous tuberculosis of the skin was much more common among those whose duties require handling tuberculous meats than among others. Blaschko spoke of the case of a cook seen by him in whom a tuberculous lesion followed the prick of a piece of bone.

It is interesting to note that Dr. Hartzell's two cases were both of the verrucous variety, the origin in both having been almost certainly bovine. Drs. Joseph and Trautmann [87] report three cases of verrucous tuberculosis of the skin occurring among employees of the municipal abattoir in Berlin, who worked exclusively with tubercular animals.

Case I.—J. G., aged forty-five years. Was never ill before, and no tuberculosis in his family. His duties were to cut up tubercular and condemned carcasses. In 1892 or 1893 he received a small wound of the middle finger of the left hand, and a nodule soon formed, surrounded by a zone of redness. It increased slowly until 1897 or 1898, when the thermocautery was resorted to with partial success. About a year ago the man tore the first finger of the same hand on a bone from a tubercular cow. The wound cicatrized in about eight days, but later a nodule developed on the site. When examined in August 1891 the disease was confined to the first and middle fingers of the left hand. On the first finger nodules about the size of a pea protruded from the surface, 1 mm. to 2 mm., moderately red, and having in the centre a broken area covered with small crusts. The nodule on the middle finger was much larger and the verrucous condition more developed.

Case II.—J. O., aged thirty-five years. No history of tuberculosis in family. The patient, his wife, and three children had always been healthy. Has been employed in the abattoir for one year, and always in division reserved for tubercular animals. Three months before he had suffered a wound of two fingers, following which the disease developed. On the little finger is a hard, rough, thickened area extending entirely through the skin. On one side is an ulcer which goes deep into the corium.

Case III.—K. S., aged thirty-eight years. Employed in handling tubercular material. He showed a typical tuberculosis of the skin. As the case was being treated by another physician, the details are not given.

It would seem that instances of infection through wounds are not as uncommon as has been supposed heretofore. Their value has been questioned on the ground that inoculations do not always correspond to natural infections. I do not pretend that such cases settle the whole question definitely, but they do prove beyond question that there is no peculiar quality in the tissues of man which makes him an unfit soil for the bovine tubercle bacillus. Furthermore, they afford us means of comparison with similar cases in which the invading organism is of human origin, wounds of the hand while operating on tuberculous cadavers, or in cleaning cuspidors used by phthisical persons being not uncommon. I have been at some pains to study the reports of such infections, and feel bound to conclude that the bovine bacillus is at least as virulent as the human for man when introduced in such manner. We know from experimental, as well as

clinical evidence, that the skin is the tissue most unfavourable to the growth of the tubercle bacillus. If, then, the bovine bacillus can successfully invade the skin and multiply there, with the production of characteristic changes, it seems we are fully justified in believing that organs and tissues that are known to offer favourable soil to the human bacillus will also prove favourable to the bovine organism. On the other hand, I know of no animal which is susceptible to the human bacillus yet immune to the bovine. Birds are equally refractory to both, a small proportion of those inoculated or fed with either succumbing to tuberculosis.

Tubercular Infection through Food.—Koch bases his opinion as to the non-transmissibility of bovine tuberculosis to man largely on the alleged rarity of primary intestinal tuberculosis. He says:—"If the bacilli of bovine tuberculosis were able to infect human beings many cases of tuberculosis caused by the consumption of aliments containing tubercle bacilli could not but occur among the inhabitants of great cities, especially children." "That a case of tuberculosis has been caused by aliments can be assumed with certainty only when the intestine suffers first—*i.e.*, when a so-called primary tuberculosis of the intestine is found." He says that he has seen only two such cases; that at the Charité Hospital in Berlin only ten cases were seen in five years; that among 933 cases of tuberculosis in children at the Emperor and Empress Frederick's Hospital for Children, Baginsky never found tuberculosis of the intestine without simultaneous disease of the lungs and bronchial glands; that Biedert found only sixteen cases of primary intestinal tuberculosis among 3104 children examined post-mortem.

The assumption that the proportion of tuberculosis caused by food is correctly revealed by the lesions of the intestine or mesenteric glands is certainly erroneous, and leaves out of consideration entirely at least one very important avenue of infection.

Infection through the Tonsils.—The numerous observations made of late years leave no doubt that the tonsils sometimes act as the port of entry for the tubercle bacillus. As well put by Baup,[38] "discussion is only possible as to the greater or less frequency of these lesions, and their pathological importance," a position sustained not only by the work of other observers, but by his own, in which he examined the tonsils from those cases only in which tuberculosis of the lungs was absent, and other ports of entry could be excluded. Dieulafoy,[39] by the inoculation of guinea-pigs, found tuberculosis in fifteen of ninety-six cases. Latham,[43] who was careful to employ only the interior portions of the tonsils, in forty-five consecutive cases of children from three months to thirteen years of age, seen at autopsy, found seven which were tuberculous. One of the most recent studies of this subject is that of Friedmann.[40] who examined the tonsils obtained from ninety-one children at autopsy, and fifty-four cases removed by operation, all but one of the latter under five years of age. Of the ninety-one cases, in three there was tuberculosis, probably not primary; in five there was tuberculosis, probably primary, with secondary involvement of lymphatic glands, intestine, and bone; in one the tonsils showed many tubercles, giant cells, and tubercle bacilli, the rest of the body being free; in seven (two with and five without tuberculosis in other parts of the body) the tonsils contained typical giant cells, but no bacilli could be demonstrated; in three, giant cells attributed to other causes were found; in eleven, which showed extensive tuberculosis of other parts of the body, the

tonsils were free, but showed scars; in four the tonsils were free, there being tuberculosis of the internal organs; in three bacilli were demonstrated in smear preparations, though no tubercles were found. In the remaining fifty-four cases tuberculosis was not found in any part of the body. Only one of the operative cases showed primary tuberculosis.

When we remember the frequency with which children are fed, and the ease with which particles of food lodge in the tonsils, we cannot but think that Friedmann is reasonable in his conclusion that tuberculosis of the tonsils is quite common in children, and that the infection takes place directly from food, and not through the lymph, blood, or by inhalation.

Numerous authors who have studied this question give corroborative facts, lack of time preventing further citations. Those given are sufficient, I think, to show the fallacy of looking exclusively to the intestine for the proof of a food infection. I beg to call attention to the specimen showing ulceration of the tonsils which I have here, taken from one of four pigs which were infected by feeding, ten meals containing pure cultures of tubercle bacilli being given. All the animals contracted general tuberculosis, most marked in the lungs, and ending in death. Three of the four presented lesions of the tonsils similar to those shown, while in only one could any lesion of the intestine be found. In the tonsils of the fourth pig which showed no macroscopical lesions, many tubercle bacilli and areas of caseation were found. In three of the four pigs the cervical and mediastinal glands were markedly involved, and tubercle bacilli were readily demonstrated in smear preparations made from the cut surface of the salivary glands in the remaining one.

A similar observation was made by Koch, who, however, seems to have entirely overlooked the importance of it. He says—"These animals had, without exception, severe tubercular disease, especially tuberculous infiltration of the greatly enlarged glands of the neck and of the mesenteric glands, and also extensive tuberculosis of the lungs and spleen."

Clinical Observation.—The number of cases in which infection can be traced to the consumption of tuberculous milk is not large, and almost all of them are open to some criticism from the fact that all other sources of infection cannot be positively excluded. From the nature of the case this will always be true, and we can never shut children up and feed them with tuberculous milk in the way of an experiment. However, evidence in some of the cases is so clear that Nocard has well said: "It has almost the value of an experiment," and it is quite sure that we would unquestionably accept evidence of much less value if any other disease than tuberculosis were concerned.

The cases reported by Stang,[41] Demme,[41] Gosse,[41] Ollivier,[42] and Law,[44] involving nineteen persons, are too well known to need repetition here.

Ebers[45] reports six cases, collected by several observers, of tuberculosis in children, attributed to milk of tuberculous cows.

Bang,[46] through inquiries in Denmark, has collected reports of nine persons in whom infection could be traced with reasonable certainty to milk from tuberculous cows.

Von Ruck[47] reports the cases of a father and child which are very convincing, and says that he has observed several others in which there was very good reason to believe that milk was the agent of transmission for the tubercle bacillus.

Klebs and Rievel[48] have recently reported two cases which came under

the observation of the former. A healthy young man employed by Klebs to assist in making some investigations on milk infection had the habit of drinking the milk of the tubercular cows used in the experiment. In a few months he died of miliary tuberculosis. The second case was one of six male children, who died at the age of two years of tuberculosis of the cord and meninges. This child was the only one of the six fed on cow's milk, and the only one that developed tuberculosis.

POST-MORTEM EVIDENCE. — The reports of pathologists based on autopsies prove conclusively that in a certain proportion of persons dying of tuberculosis, and especially in children, the infection takes place through the intestine. As to the frequency of infection by this route there is a wide divergence of opinion, due partly, no doubt, to the fact that this method of infection is much more common in some localities than others, owing to local conditions, and partly to the interpretation given to the post-mortem findings. Our method of determining the portal of entry is not entirely satisfactory, as is shown by the large number of cases reported by many pathologists in which it is impossible to locate the primary lesion.

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(*To be continued.*)

VAGINAL OVARIOTOMY.[1]

BY H. FULSTOW, V.S., NORWALK, OHIO.

I WAS requested by our worthy Secretary to prepare a paper on "Ovariotomy in the Mare." Every veterinary surgeon who is in active practice runs across more or less animals where the operation would be beneficial both to owner and animal; besides building up a reputation for the practitioner himself, and greatly helping to fill one corner of his empty pocketbook. This operation is indicated in ovarian diseases, such as tumours or dropsy of that organ, and especially in nymphomania or œstrumania. Such animals are generally a source of great annoyance to their owners and every one who has anything to do with them. They are ticklish and excitable, when anything touches them they squeal, switch and urinate or kick. They appear to be in heat nearly all the time, but generally fail to breed. I shall not go into the anatomy of the organs and their annexes, as every one here is as familiar with the parts as I am. I shall simply give you the history of a few cases that have come under my personal observation in the last year or two.

Case I.—Black mare, 15.2, six years old, sound, with good style, and a grand individual. This mare was a good, kind animal when not in heat, but when in heat she would squeal, switch, and kick, especially when meeting teams in the road, and finally got so bad that it was not safe to hitch her during that period. She was operated upon Oct. 19, 1900, by Dr. Holland, of Wellington, O., and myself; after operation she showed slight colicky pains and wanted to lie down, but was blanketed and kept walking for about half an hour, when she appeared free from pain. She was then placed in a clean comfortable box-stall, well littered with straw, and immediately laid down and appeared sick, but did not roll. She was watched all night, but was free from colicky pains; took a few swallows of chilled water, but ate nothing until morning, when she took a fair feed of cooked oats and bran. Temperature 101.4; she appeared quite bright, picked around some all day, but was fed nothing but cooked food. Oct. 21st, temperature 100.4, patient bright and ready to eat any time. Just one week after operation she was taken home, a distance of 2½ miles, was hitched next day and has been driven and worked ever since. This mare now is as quiet as a gelding, and the owner's wife drives her anywhere.

Case II.—Grey mare, seven years old, 16 hands high, pacer and quite speedy. This was a good clever mare until the summer she was four years old; one day while in heat she kicked a cart all to pieces and from that time on she was a bad one; would switch, kick, and urinate all the time while in harness, and finally got so bad it was not safe to go into the stall beside her, and she appeared to be in heat nearly all the time. I advised breeding, which was done, and a nice filly was raised from her; she was bred again the following year several times, but she failed to get in foal, so her owner tried working her on the farm, but she was as bad at her old tricks as ever, and he got utterly disgusted and traded her off to my neighbour, who runs a feed barn and deals some in horses. He kept her about one week and hitched her twice to a long-shafted breaking cart, with a rope across her rump to keep her from demolishing everything.

[1] Read before the Ohio State Veterinary Medical Association, Jan. 14th, 1902.

XUM

I advised him to have her spayed, but he was afraid of the risk, so I traded for her. I put her in a box stall and gave her a good scalded bran mash three times daily for three days, with ½ oz. hyposulphite of soda in each mash; then I starved her for twenty-four hours and gave her the ½ oz. doses of hypo. in a little water three times daily before operating upon her.

She was spayed May 28, 1901. After operation she appeared quite uneasy, so was blanketed and kept walking for some time; then was placed in a comfortable box stall, same as No. 1, where she at once laid down with her head between her fore legs, and appeared sick, but did not roll or thrash around, and was watched until midnight, when my man thought it unnecessary to watch her longer. She took a little chilled water, but ate nothing until next morning, when she took her feed of cooked oats and bran.

Morning of 29th, pulse 40, tem. 101.3; she strained some when her bowels moved, so I gave her an enema three times daily of luke-warm water. She appeared quite bright all day and picked around. At evening, pulse 40, tem. 101. May 30, 8 A.M., pulse 34, tem. 100.3. At 6 P.M., pulse 42, tem. 101. May 31, 8 A.M., pulse 36, tem. 100.3; 6 P.M., pulse 36, tem. 101. June 1, 8 A.M., pulse 36, tem. 100; 6 P.M., pulse 36, tem. 100.

I hitched this mare June 15 without kicking strap, and made a call about a quarter of a mile from my office. She appeared clever, and I have driven her right along in my practice from that day until now. She is perfectly gentle everywhere, and I take my wife and family out behind her at any time.

Oct. 29, while making a call in the country, and driving along at a good fair clip, she became frightened at some dump boards piled beside the road, and suddenly stopped, breaking the outside belly-band, and letting the cross-bar of the buggy run right into her, but she never did a thing, not as much as switch her tail. I think it quite remarkable, knowing as I do the disposition of the mare before she was operated upon.

Case III.—Black mare, nine years old, belonging to a neighbour of the first case; having watched her since the operation, he finally decided to have his operated upon. She was in season most of the time; would kick and urinate in the barn while going about her, and could hardly be harnessed at all; did not kick when hitched, but switched and urinated. She was operated on July 1st, 1901. This mare was not as uneasy after the operation as the other two, so was blanketed and walked home a few blocks away, and was put in a good clean box stall, where she immediately laid down with her head between her fore legs and appeared sick like the others, and was watched for some time; she took a few swallows of water, but ate nothing that night. Next morning she appeared bright, tem. 101, took a good scalded feed and picked around all day. July 3, tem. 100.4, eating well, and appeared free from pain. This mare was hitched and driven the ninth day after being operated upon, and is as gentle in and out of the barn as any horse could be.

Precautions to be observed before operating.—Examine your animal carefully and see that it is not suffering from any contagious disease, and is otherwise healthy. If fevered up with grain it is a good plan to grass or mash it out for a few days, but if in a debilitated condition try to get it built up some before you attempt to operate. An animal to be operated

upon ought to be in the pink of condition, ready to do a good hard day's work.

Modus Operandi.—Place the animal in stocks; empty out the rectum and bladder; scrub the tail and external parts with soap and then with a solution of bichloride of mercury, 1-1000, wash out the vagina with a solution of soda, 6 per cent., and see that it is perfectly clean; wind a linen bandage around the tail and have an assistant to hold it out of your way. Have your instruments thoroughly sterilized, and place them in an antiseptic solution. Scrub your hands and arms with soap and water, then wash them in bichloride solution.

Instruments needed.—One guarded knife and spaying écraseur, long.

After getting your animal ready, take your hidden bistoury in your right hand and pass it into the vagina, open it and make a single puncture through the upper part of the vagina, just above the os, then close the knife and withdraw it. Now introduce your arm again into the vagina, put the index finger into the wound, then the middle finger, then the thumb, and spread fingers as much as possible, tearing the wall of the vagina until the hand can penetrate into the abdominal cavity. Then locate the left ovary, and after finding it have an assistant enter your écraseur for you; place the chain over it and crush it off slowly, taking care to hold on to the ovary until you bring it outside the vagina. Take your left hand for the right ovary and proceed as before, always remembering to hold on to the ovary so as not to let it drop into the abdominal cavity. After you are through operating, sponge off external parts with bichloride solution, and release the animal from the stocks, blanket well, and keep walking until it is cooled off, then place in a comfortable box stall and watch it for some time. Feed carefully for several days on cooked oats and bran, and if any pain is evinced when the bowels move, give an enema occasionally of tepid water. Take pulse and temperature every day, and treat any of the results as they may present themselves to you.

While I have not, perhaps, had as much experience as some others in ovariotomy, I have endeavoured, as far as possible, to impart to you the knowledge I have gained of the habits before and after the operation, and to explain the course I have pursued in operating, and leave you to draw your own conclusions.

Extracts.

PIROPLASMOSIS IN THE DOG.

(*Continued from page* 54.)

THE slow form of the disease is indicated principally by severe anæmia, muscular weakness, sometimes fever, on rare occasions by a little hœmoglobinuria or icterus. The fever, when it occurs, occurs only at the commencement of the infection. It is always very little apparent, and only lasts a day or two. It is very often absent or passes unobserved, nothing serious in the condition of the patient attracting the attention of the owner; it is in fact seldom observed except in the experimental form of the disease. As in the acute form, it appears early, sooner when the animal has been

inoculated in the veins than when it has been inoculated under the skin. The temperature rarely exceeds 40°, remains at that point from thirty-six to forty-eight hours, and then returns to the normal; once, however, a veritable quartan fever was observed in an inoculated animal. Anæmia is the most constant symptom of this form. It is shown by the progressive pallor of the mucosæ, by the languor of the animals (which prefer to lie down, indifferent to everything about them), by the diminution of appetite, by emaciation, general weakness, dryness of the skin, and dull condition of the coat. It lasts a long time—from three to six weeks—then gradually appetite and cheerfulness reappear, the mucosæ regain their colour and the animal its strength; the cure is complete in from six to twelve weeks.

If we examine the urine from the very commencement of the infection, we generally find a little albumen, which persists for some fifteen to twenty days. Hæmoglobinuria is rare; when it occurs it does not remain for more than a day or two; most frequently the urine remains clear and yellow, but sometimes it is cloudy. Its reaction is acid, but once M. Nocard found it neutral, and the urine contained a great deal of sugar, but probably this state of the urine had nothing to do with the disease under discussion.

Examination of the blood gives an explanation of the progressive anæmia of the patients; the number of the red globules diminishes gradually until it reaches less than two millions; in one case there existed only 1,200,000 per cubic millimetre. This paucity of red globules is most apparent after the fall of the fever, and it increases still further after the parasites seem to have disappeared or become fewer; after twenty-five or thirty days the number of the globules increases gradually, but it is only after two or three months that the normal figure is reached. The loss in hæmoglobin is much less marked than in the severe form, in which it may fall to 3½ per cent. In one case in which the number of globules was only 2,760,000 there still existed 9½ per cent. of hæmoglobin. The number of white globules is always very high—from 15,000 to 30,000; one case showed 54,000. It is frequently found, in the two or three days immediately following the febrile period (when it exists), that there are leucocytes crammed with "plundered" red globules. This variety, very rare in the severe form of the disease, is exclusively mononuclear. In proportion as the cure advances the number of the white globules diminishes, and we find only a few nucleated red globules; in return we find numerous masses of hæmatoblasts.

PATHOLOGICAL ANATOMY.

The longer the disease has lasted the more marked are the lesions. The carcase is often icteric; the yellow tint, more or less intense, may approach a deep chrome. The spleen is often hypertrophied; it has sometimes three or four times the normal volume, and then extends along the hypochondria as far as the sternum. Its colour, very deep, reddens on contact with the air; its consistence diminishes without reaching actual softness. In the rapid forms these complications are wanting, but on the other hand the preparations obtained by rubbing are very rich in hæmatozoa. The liver, gorged with blood, is but little modified in appearance; it has sometimes the appearance of cardiac liver; the blood which flows from it on section is always loaded with absorbed globules. The gall-bladder, generally distended, contains a thick syrupy or clotted bile, of dark green

colour. The digestive mucosa is in rare cases infiltrated and congested at the level of the duodenum. The kidneys are most frequently highly congested; the capsule is easily detached, exposing a great number of petechial patches of varying dimensions. On section the cortical layer appears gorged with blood and covered with a delicate hæmorrhagic "quilting." The blood which flows from it is extremely rich in parasites. The lungs are often sprinkled with small apoplectic foci. In quite young animals, which die so rapidly, it is almost the rule to observe acute œdema of the lungs, with abundant reddish foam in the bronchi and trachea. The pericardium contains a little serosity, blood coloured or yellowish; sometimes we find numbers of petechial patches towards the point of the heart or under the endocardium of the left heart. The lymphatic ganglia are seldom injured. The marrow is almost always the seat of intense congestion, which gives it the fœtal appearance; it is soft and friable, and contains a great number of absorbed globules. The nerve-centres show nothing worthy of note except a little congestion of the meninges. At the post-mortem all the modifications of the blood are found which have been mentioned; the heart and the great vessels contain clots, of feeble consistence, formed almost entirely of fibrin swimming in reddish serum, heavily loaded with hæmoglobin.

The histological study of the organs shows that all these lesions proceed from the extreme distention of the capillary network by masses of globules, the greater part of which are charged with parasites.

DIAGNOSIS.

Verification of the presence of the intra-globular parasite alone enables us to affirm that a dog is attacked with piroplasmosis. When we find a dog that is anæmic, hæmoglobinuric or icteric, which is or has been covered with ticks, we may suspect the presence of the disease, and must then proceed to the microscopic examination of the blood. If the first examination remains negative, we must repeat it for three or four days on end, the parasites being often more numerous in the chronic form. The following is the mode of examination. We place upon a perfectly clean glass slide a tiny drop of blood obtained by pricking the skin of the ear; we spread this out in as thin a layer as possible with the help of another slide by sliding its edge over the flat surface of the other. We dry it rapidly in the air, we fix it by alcohol ether or by absolute alcohol, and then when the fixing medium has completely and spontaneously evaporated, we spread over the surface of the slide a few drops of Nicolle's phenicated thionine. If the thionine is good a contact of thirty seconds is sufficient; we wash, we dry, and we examine at a magnitude of 500 to 600 diameters. The hæmatia are coloured pale green; the parasites show themselves in the form of small bodies with a sharply defined contour coloured blue, and a central part without colour or of a faint blue tint. The most of the infected globules contain only one voluminous parasite of round shape, but we find also, especially in the rapid form, globules which contain two, four, six, eight, twelve, and as many as sixteen parasites; they are then smaller and irregular in their contour. The number of the absorbed globules varies greatly according to the form of the disease and the period of evolution. In the acute forms, during the fever or immediately after, whether there be a hæmoglobinuric crisis or not, the

parasites are in considerable quantity. In the slow forms they are so rare that they sometimes escape the notice of the cleverest observer. In these difficult cases the examination of the preparation must be directed to the point where the layer of blood to be examined ends. It is there that we have most chance of seeing parasites if the blood contains them. It is therefore a wise precaution to place on the slide only a tiny drop of blood, so that the very thin layer which it will form on being spread out shall not extend to the extremity of the slide.

ETIOLOGY.

Nothing is more clearly established than the part played by the tick in the development of bovine piroplasmosis. The splendid researches of Smith and Kilborne, confirmed by those of Pound, Koch, and Lignières, have shown that in order to produce Texas fever (tick-fever, red-water, tristeza) it is sufficient to place on the surface of the body of adult cattle coming from non-infected countries larvæ born of the tick (*Ripicephalus annulatus*) which have lived on infected cattle. Since then, wherever the disease has been observed—and its geographical area is enormous—investigators have been able to establish a close connection of cause and effect between the appearance of hæmoglobinuria and the presence of ticks on the skin of the patients. The strong analogy which exists between the symptoms of piroplasmosis, whether in the dog or the ox, and especially the almost complete identity of the hæmatozoa in the two species, leads us to think of an etiology of the same kind. In all the observations made at Alfort the dogs had all been recently covered with ticks, and some still had them; they belonged to the species *Dermacentor reticulatus*. (It appears that piroplasmosis (or malignant jaundice) in the dog in South Africa is due to a different ixode, *Hæmophysalis leachi*). It is quite probable that the Dermacentor is the ordinary agent of the transmission of the disease, at least in France. It is impossible, says M. Nocard, to prove this, for he has not succeeded in infecting dogs by covering them with larvæ obtained from female ticks infesting the patients at Alfort. In a note he says that a very interesting paper by Lounsbury gives a possible explanation of his failures. It is here stated that the larvæ of the *R. annulatus* may accomplish their full evolution on the same ox, whilst those of the *H. leachi* abandon the dog which harbours them on the eve of each change; this change once accomplished, on the ground or on the litter, the nympha and the adult tick must find a new post in order to prepare for the next change or for the laying of eggs. Besides this, it appears that neither the larvæ nor the nymphæ nor the males have the power of communicating the disease; the adult females alone seem to have the pathogenic power. It is probable that the Dermacentor behaves like the Hæmophysalis, adds M. Nocard, for after having seen the larvæ deposited on the skin of the experimental dogs beginning to grow he found that they entirely disappeared before passing into the nympha stage; then got lost in the litter.

In all the cases treated at Alfort, so far as was known, the animals were hunting dogs which had recently been employed in the chase over land covered with trees or brushwood, or had lived in kennels infested with ticks.

TETANUS IN THE DOG.

BY MM. DECOURNEAU AND TAYLES.

TETANUS is not as rare in the dog as is generally supposed. It is generally manifested in the head, and the contraction of the muscles of the jaws and lips gives a grinning or snarling look to the face. The ears are flattened down, the eyes sunk in the orbits, and the skin over the forehead wrinkled.

This form in the dog is not dangerous, as the patient is able to take nourishment.

Generalised tetanus is seen in the dog, but it is uncommon. It has been seen in a fox terrier, in which the disease assumed a serious form after a fortnight. The authors employed anti-tetanic serum, and consider that it assisted in obtaining a recovery.

(*Revue Vétérinaire*, January 1902.)

JOSHUA A. NUNN,
Vety. Lieut.-Colonel.

GANGRENOUS MAMMITIS IN THE SHEEP.

M. PLEINDOUX writes that he was called in to visit a flock of some 200 sheep, some of which the owner said had been stung or bitten in the udder by a venomous creature, and were apparently dying. On examination M. Pleindoux found seven cases of gangrenous mammitis, commonly called "spider" (*araignée*). Five animals died within some four or five days. The patients were treated as follows:—With the bistoury M. Pleindoux made on each udder some half-dozen longitudinal incisions from the base to the teat, and sprinkled the whole with powdered sulphate of copper. Five sheep thus treated recovered slowly, and were sold to the butcher. On the other hand, the healthy animals were removed from the fold and shut up in another place. The fold was completely disinfected, all dung was removed, and the ground was scraped and sprinkled with lime water. The walls were whitewashed, and the eating-troughs cleaned and disinfected. Twice a day the sheep were laid on their backs and the udders examined and washed with a 2 per cent. solution of cresyl.

(*Journal de Méd. Vét. de Lyon.*)

ALIMENTARY POISONING IN SWINE.

ALL practitioners know how numerous are the cases of disease in swine, the nature of which remains undetermined even after post-mortem examination. Professor Mathis is of opinion that defective feeding is the principal if not the only cause. Often in the feeding of swine we have recourse to residuary and sub-products, and where these are not available we often select the worst of natural products. As long as these are quite fresh there is not much to say against their use. In some countries potato-pulp from the starch factories is given, and this stuff forms good and economical feeding, provided that it comes from sound plants and has not undergone any detrimental change. But all the potatoes used in these

establishments are not quite sound; many are decayed, and this is often the case after frost, so that putrid fermentation rapidly sets in. Certain products used almost without danger in the feeding of adult ruminants, such as vigella arvensis in seed or in flour, and cotton-seed cakes, produce disastrous effects on young swine, and even on adult swine when they enter too largely into the daily ration or are used for too long a time. Another cause of gastro-intestinal troubles is the use of soda in washing dishes. A number of swine which had eaten the refuse from a hotel showed the effects of soda-poisoning. The great danger, however, and one which is rarely thought of, is the deterioration which goes on in food between the time when it is prepared and the time of ingestion. All vessels used for containing food ought to be thoroughly examined, kept carefully clean, and emptied to the last fragment. What are the manifestations of these poisonings? Almost always signs of gastro-enteritis associated with nervous disorders, vomiting, inflation, diarrhœa, weakness of the hind limbs, sudden contractions, convulsions. Prognosis is very difficult; death may supervene in less than an hour, or may not occur for several hours. Patients which survive the day usually recover, but remain for a long time weak. These poisonings must not be confounded with measles or pneumo-enteritis; the characteristic symptoms of these two affections are quite wanting. The best treatment is abundant and repeated evacuating washes with linseed-meal water, to which sulphate of soda has been added. A little milk and water ought to be placed within reach of the patient, but all other feeding stopped until disappearance of the symptoms.

(*Journal de Méd. Vét. de Lyon.*).

TUBERCULOSIS IN THE HORSE.

At the autopsy of a horse which died after presenting, amongst other symptoms, manifestations of an abscess in the liver, M. Roger, a military veterinary surgeon, found, in addition to the great emaciation, a fatty hepatic cirrhosis, tuberculous granulations in the suprarenal capsules, and a large abscess in the spleen, the pus of which showed the presence of the Koch bacillus. This observation is interesting, first, on account of the ravages which the toxines of tuberculosis may produce in the viscera; and, secondly, on account of the absence of polyuria in the patient, which proves that this latter symptom does not always accompany tuberculosis.

(*Revue Vétérinaire.*)

A NEW TRYPANOSOMA IN CATTLE.

This parasite has been found in cattle by M. Theiler, a veterinary surgeon at Pretoria (Transvaal). It is clearly distinguished from other trypanosomata—from the nagana amongst others; it cannot be inoculated into the horse, goat, dog, guinea-pig, or rabbit. It presents towards its middle an oval kernel, and in the posterior portion there may be observed a rounded corpuscle strongly coloured. The flagellum forms about a fourth of the length of the parasite; it is continued along the undulating membrane, which

is pretty broad and much wrinkled. The protoplasm contains many fine chromatic granulations. This parasite is pathogenic, and produces anæmia, with or without fever; after the fever we find parasites in the blood for several weeks. Less frequently it produces pernicious anæmia with rapid destruction of the red globules, and death with swelling of the spleen. When there is pernicious anæmia the blood is quite abnormal; the corpuscles are diminished in number and deteriorated, and we find normal globules and others which are too voluminous; also nucleated corpuscles. The blood does not show parasites, but when inoculated into calves it produces the disease.

(*Journal de l'Acad. des Sciences.*)

THE PURCHASE OF HORSES IN IRELAND.

THE SECRETARY OF STATE FOR WAR *v.* STUDDERT AND OTHERS.

On Wednesday, the 9th July, the above action came on for trial before the Vice-Chancellor, sitting in No. 1 Nisi Prius Court, which was crowded with professional men and witnesses.

The Solicitor-General opened the case for the plaintiffs, and said they were His Majesty's Principal Secretary of State for the War Department and Colonel Alfred George Lucas, the latter of whom sued on his own behalf and that of the other members of the Imperial Yeomanry Committee. The defendants were Major Charles Washington Studdert, his sons, John A. Studdert and Thomas Studdert, Wilfred Fletcher, and John W. Gregg, a son-in-law of Major Studdert, and put in considerable correspondence, in which it was stated that a Mr. Howard had been engaged by Major Studdert. On the 18th February Major Studdert wrote as follows:—"My Dear Colonel St. Quintin,—As I began the job, I will go on as long as you are good enough to have me. I am certain I will be able to get the right sort for £30, as I knew the animals I consider best suited for the work were those the dealers give least money for—hardy, active, rough little horses bought from the small farmers. I have given much the larger orders to Widgers and Meleady, but I will take some from others as well; but you may trust me to get you the right sort. I won't take one from J. Watson's man for good reasons, which I will give you when we meet. Let me know if you wish me to meet you when you come over to inspect the horses already purchased by me." The reason Major Studdert afterwards gave for not taking horses from Watson's man was that that man asked Howard, the vet., for a handover; but when his Lordship heard what Major Studdert himself did, he would see that it was an illustration of the old maxim of straining at a gnat and swallowing a camel. He (Solicitor-General) undertook to prove that Major Studdert about this time conceived the intention of using his two sons and his son-in-law to go about the country and buy poor impoverished horses at from £14 to £20 apiece, which he returned to the Yeomanry Committee as having been bought in the open market from ordinary dealers at £30 each. This was the basis of the plaintiff's complaint. It was an object of Major Studdert to go outside of Widger and Meleady; but Colonel St. Quintin reluctantly gave way to that, only allowing him to go outside them for a few odd horses. On

the 20th February 1900 Major Studdert wired to Colonel St. Quintin:—"Will commence to-morrow; am I to buy wherever I can find them, and as many as I can?" There was another telegram from Colonel St. Quintin, to which the previous one appeared to be an answer, viz.:—"Go ahead; buy as many as you can, sharp." On the 21st February Major Studdert wrote to Colonel St. Quintin:—"On receipt of yours, dated 16th, and received by me on the 18th, I at once wrote to the different dealers and gave orders to at once commence buying. Of course must complain of the price, but I am pretty sure they will get them all the same. When I got your telegram yesterday I wired to hurry them up as fast as possible. I hope to have a reply to my wire to you of yesterday, as I am not quite sure if you mean me to procure more than 300 or not. You say in it buy as many as I can. Does that mean as many as I can of the original order, or as many as I can over it? It is important that I should know this at once, and I hope you will let me have a reply without delay." At that time a correspondence passed between Major Studdert and the other defendants, all of which had been destroyed. The last word from Colonel St. Quintin as to the persons from whom the horses were to be bought was the following telegram of the 22nd of February to Major Studdert:—"Kindly buy up to 500 horses, giving largest order to Widger, next to Meleady, but to no others. You can buy a few horses outside of them. Will write later." What was the duty of Major Studdert as purchasing agent for the War Department? It was to buy horses after he himself and the veterinary surgeon whom he had selected had passed them. The horses were to be shipped at once to Liverpool, where transports were being gathered to take them to South Africa. But what was done by the defendants? When one remembers how far the lives of young soldiers depended on the speed and soundness of the horses supplied to them it was an extraordinary thing that men in the position of Major Studdert and his sons could stoop to such a transaction as he (counsel) was about to state. In the course of the discharge or pretended discharge of his duty, Major Studdert used his son John, a young man of twenty-three or twenty-four years of age, who lived with him, his son Thomas, and the latter's partner, and his son-in-law, Gregg, as agents to gather the refuse horses of the counties of Clare and Kerry at prices of from £12 to £20 at the outside, and he charged the Yeomanry Committee £30 for every horse. The matter was set about in a very deliberate way. Thomas Studdert took the south-west of Clare and ransacked it; John took the balance of Clare; and the son-in-law took the adjoining counties of Kerry and Cork. John Studdert procured 124 horses, for which he paid an average price of £20 each. The case made for him was that he was an independent vendor dealing at arm's length with his own father, in whose house he was living. As regarded every one of those 124 horses, Major Studdert, his sons, and the veterinary surgeon agreed in representing to the Yeomanry Committee that they had been purchased from a dealer named P. Collins. But it was now admitted that Patrick Collins was a young clerk in the employment of Major Studdert at weekly wages, living in the house with him, and who never owned or sold a horse in his life. Amongst the documents disclosed in the case was a portion of a letter of Major Studdert of the 8th March 1900 to Colonel St. Quintin, or to some other official of the Yeomanry Committee, which ran as follows:—"Sir—I have the honour to furnish three accounts for horses purchased by me from Messrs. Fletcher, Smith, and Collins, and to request you will

send a cheque for the amount, as I have given them further orders, and they want the money to enable them to carry them out." Smith was a *bona-fide* dealer, but Collins was a "dummy." Enclosed in the letter was an account purporting to have been furnished by Collins to Major Studdert as follows:—"March 7th, 1900. Dear Sir—Herewith I send you the amount of account for 48 horses purchased from me for the Irish Yeomanry Committee.—Your obedient servant, PATRICK COLLINS." That was actually written by the veterinary surgeon. The account was for £1440 for 48 horses at £30 each. It was endorsed by Colonel Gordon and paid, but the receipt signature, "Patrick Collins," was also in the handwriting of the veterinary surgeon. On the 13th of March the Yeomanry Committee, in response to Major Studdert's letter enclosing the bogus account, sent a cheque for £3616 : 5s. The next portion of the 124 horses was a lot of 60 which Major Studdert, in a letter to Colonel Gordon of the 26th March, stated that he bought from Mr. P. Collins, of Corrofin; and in a letter to Colonel Gordon of the next day Major Studdert introduced one of the many artistic touches that he employed in carrying on the deceit, for he said—"I enclose accounts from Messrs. Collins, Fletcher, and Gregg, which I have examined, except that in my opinion £3 would be enough for the expenses of Collins's man." The claim for the expenses was £4, and that letter was to show how keen he was in looking after Collins. Another cheque for £5167 : 10s. was sent to Major Studdert, which included £1800 for the 60 horses, and that cheque, as well as the previous one, bore the endorsement "per pro C. W. Studdert, John Studdert." On the 3rd of April Major Studdert wired to Colonel Beckett, one of the Committee, acknowledging the receipt of the cheque for £5167 : 10s., and adding—"Will send dealers' account in a few days." That was part of the sham in which Collins was represented as an outside dealer. John Studdert lodged the amount of that cheque to his father's account, and then drew separate cheques for the portions which he claimed, namely, £1240 and £1804. In a subsequent letter dated "April" only, Major Studdert wrote to Colonel Beckett—"I enclose your receipts from the three dealers, the persons to whom I paid the £5000 cheque you sent me on the 29th of last month." Then there was a receipt signed by Patrick Collins "for £1804 due to me for 60 cobs, and £4 expenses of man to Liverpool." Every word of that was in the handwriting of John Studdert. To complete John's lot 16 more horses were required, and on the 30th March Major Studdert wrote to Colonel Gordon—"Herewith I enclose you forms for 16 horses from Collins." These horses were sent, but they were not paid for, because the 48 horses that constituted John's lot were found on arrival in Liverpool to be of such a shocking and scandalous kind that the Committee said—"We cannot stand this; you must take 21 of them back, because they are absolutely useless for any purpose." A number of the horses were, however, kept in order to see whether by feeding they could be made fit to put on board ship; but 12 were rejected. These at £30 each represented £360, and Mr. John Studdert, claiming that the Government owed him £480, gave them credit for £360 for the 12 bad horses, and counterclaimed on the action for a balance of £120. Between the 8th of June and the 20th of August a correspondence took place between Major Studdert and the Committee, in which he insisted that the dealer Patrick Collins wanted to be paid for the horses. There were ten letters in all, and six of them purported to come

from Collins, but were in the handwriting of John Studdert. The latter represented that he bought four horses from Howard, the vet., at £30 each, and resold them to his father. The action of Mr. Thomas Studdert and Mr. Fletcher in the matter was equally discreditable. Thomas Studdert and his partner purported to have sold as dealers to Major Studdert 142 horses. There was a document showing that those horses cost Thomas Studdert about £20 a-piece, so that during three weeks he made the tidy little profit of £1400. These were bought in three lots, viz., 48 on the 3rd of March, 69 on the 19th of March, and 25 on the 29th of April. It was necessary to conceal Thomas Studdert's name from the Committee, and consequently every one of the horses was sent forward as bought from Mr. Fletcher. The case now made by Thomas Studdert was that he and his partner bought the 142 horses, and that he (Studdert) sold them to his father. Fletcher never bought a single horse; they were all bought by Thomas Studdert in the county of Clare. The case of Fletcher was somewhat different from that of the other defendants, but he allowed himself to be brought into the transaction, and he would have to take the consequences. The Committee now began to get very anxious about the quality of the horses, and refused to pay Fletcher, whom they still thought to be a dealer; and from the 18th of April to the 15th of June letters passed between them and Fletcher claiming to be paid, until finally the Committee, believing the transaction to be an honest one between Major Studdert and an outside dealer, sent Fleteher a cheque on the 15th June for £750. The case of Gregg was different from the others. He was a farmer having 500 acres in the county of Meath; and he alleged that he sold 57 horses. In February, when the arrangement was devised, part of it was that Gregg should go about looking for horses; and he was brought from the county of Meath to hunt up wretched animals in the wilds of Kerry and Cork. He now said—"I was an independent honest dealer, and I had my father-in-law at arm's length, just as John and Tom when they were masquerading; I made £570 on the 57 horses, and it is my own profit and I intend to keep it." There was no deception required as to him. Major Studdert never informed the Committee that Gregg was his son-in-law, but went through the same performance with him that he did with Tom and Fletcher, purporting to return him as a horse dealer. He sent forward Gregg's name, but that was strong evidence to account for his suppression of the names of Tom and John.

VICE-CHANCELLOR.—What is the charge against Gregg?

The SOLICITOR-GENERAL.—That he was a party to this arrangement, by which, while in reality acting as agent for his father-in-law, he was assisting his father-in-law to obtain these illegitimate and false profits. He was a purchasing agent, bound to give the best of his skill and ability and to deal at arm's length.

VICE-CHANCELLOR.—Was he in communication with the War Office at all?

The SOLICITOR-GENERAL.—No. That is what we complain of.

VICE-CHANCELLOR.—Did he get any money?

The SOLICITOR-GENERAL.—Over £600. He was concerned with 57 horses, but only paid for 24 of them by cheque. He paid for the rest in cash, but the horses he bought were the worst and cheapest of the lot. They cost £17 : 10s. each, which gave a clear profit of £10 per horse. The plaintiff's claim in the action was only for liquidated damages—the

minimum of their rights. They were only seeking to recover the difference between what the horses cost and what they had been compelled to pay for them. A gentlemen named Stafford Jackson was employed by the Yeomanry Committee to look after the horses after they had arrived at Liverpool, and they were intrusted there to a firm called Shephard and Grand, who had a large horse repository.

VICE-CHANCELLOR.—Why do you go into this.

The SOLICITOR-GENERAL.—The suggestion in some of the letters is that the horses were quite good enough, and that they would not have turned out so badly if they had been better looked after. The action related to 124 of John Studdert's horses, 142 of Fletcher's, and 57 of Gregg's. The first that arrived in Liverpool were the 48 that purported to come from Patrick Collins. When Mr. Jackson saw them he at once complained of them to Colonel St. Quintin, who happened to be in Liverpool at the time. Colonel St. Quintin made light of his objections, at which Mr. Jackson was so dissatisfied that by his instructions the owner of the repository went to London and interviewed the Committee, who directed Colonel St. Quintin to see the horses again. There were then 181 horses, and of that number Colonel St. Quintin rejected 21, and 41 were put back for further consideration. Of the 21 that were rejected, 12 came from Collins's 48. On the 8th March 1900 Colonel St. Quintin wrote to Major Studdert as follows:—"My Dear Studdert—There is a devil of a row on as to the condition of these poor horses that went to Liverpool, so please be very careful what you buy, as there are plenty here ready to cram the Irish trade. Their condition is so poor that it is hardly fair to put them on board for such a voyage." That was written three or four days after the arrival of those horses in Liverpool. On the 24th of March 1900 Colonel St. Quintin went to South Africa, and his duties in connection with the remounting were taken up by Colonel Gordon. The condition of the horses that were arriving in the meantime was absolutely deplorable. They were wretched, starved miserable creatures, covered with vermin, and some of them were diseased. On the 5th April the Committee deputed Colonel Gordon to inspect the horses at Liverpool, and he reported as follows:—"There were 186 remounts at Liverpool which I inspected, and I found 83 to be suitable as Yeomanry remounts, and the remaining 103 were unsuitable. Of those which are, in my opinion, suitable, many are in a very low condition; some of them have been newly docked, and it is doubtful whether all of them will be fit to embark by the 18th. As regards the unsuitable remounts, some are physically unfit, owing to bad conformation and want of power; some are too old. Many of them have been newly docked, and in the opinion of the veterinary surgeon, in which I concur, a newly docked horse ought not to be embarked. I attach the numbers of the suitable and unsuitable horses. In forming the above opinion I have been guided by the assumption that these remounts are required for embarkation at a very early date. If, on the other hand, the Government can afford to wait two or three months until they are in good condition, then some of the horses now described as unsuitable might develop into fair remounts for mounted infantry." He further said:—"Except where otherwise noted, the remounts were obtained from Ireland. Major Studdert says the price paid for remounts was on an average £30; with very few exceptions I do not consider them worth that amount. With very few exceptions the condition of the remounts was very bad, and a

large number were suffering from strangles, and were otherwise sick." Apropos of the condition of the horses in a letter received by me, Major Studdert wrote as follows:—"I consider they were a good lot and in good condition, with very few exceptions; at least they left here looking well." The purchasing agent is of course responsible for passing horses which were unsuitable at the time he inspected them; but in the absence of Major Studdert's explanation, written or verbal, I am without personal knowledge of the condition of the horses at the time they were passed, and I am not in a position to say where the responsibility for the present wretched condition of the horses rests. On the 19th of April Colonel Crichton wrote to Major Studdert enclosing Colonel Gordon's report and refusing to accept the 103 horses, and requiring him to supply others. Major Studdert replied saying that the horses that had got strangles contracted in England; and he further said:—"The price paid by me in every case was £30, which was the same Colonel St. Quintin directed me to give, and I arranged with the buyers accordingly. Owing to the urgent and large demand for horses in this country, and this being the busiest season of the year, farmers are very reluctant to sell, and they cannot therefore be bought for a lower price than £30." He knew that to be deliberately false. So far were the farmers from being reluctant to sell their horses, that there wasn't an old nag in the country that they were not rushing in with to Major Studdert's yard, where the farce was gone through of the son John coming out at one door as an independent buyer, giving £17 for a horse to the farmer, and becoming the vendor of it to his father for £30. On the 19th Lord Lonsdale wrote to Major Studdert stating that if he was prepared to supply other horses in place of 95 reported unfit they would be taken if passed by a responsible officer, but that otherwise the unfit horses would be sold. Major Studdert replied refusing to replace them; and said that as to any grounds of dissatisfaction that the Committee had he must refer them to the dealers who supplied them, and whose names were given in the descriptive rolls already furnished. The "dealers" included Collins, Fletcher, Gregg, and Company. Finally there was an auction in Liverpool of the horses that were "cast" in order to pay their expenses, and 13 of those supplied in the name of Fletcher, 10 in that of Collins, and 3 in that of Gregg were sold. As to the whole 124 horses dealt with as belonging to Collins, 12 were returned, and 7 died, besides the 10 sold. Of Tom's 142 horses, 3 were rejected, 4 died, and 19 were sold to pay expenses. Of Gregg's horses, 6 out of the 57 were worthless. On the 25th of May Major Studdert was called before the Committee, and a long sitting took place; but even then he kept up the deception, for he never gave a hint that any of his sons or relations were mixed up with the buying of the horses On the contrary he expressly maintained that he bought from dealers in open market, and that he had no power to compel them to take back the horses. His defence before the Committee—and also in his pleadings—was that he was not a purchasing agent, but only an inspector of the horses. On the 16th of March Major Studdert wrote to Colonel St. Quintin an official letter as follows:—"Dear Sir—I beg to inform you that I have this day with Mr. Balfe carefully examined all the horses, according to your directions. I herewith enclose you a statement of my inspection, with remarks attached to each army number. I find that No. 1237 is not one of my lot. I would strongly recommend you keeping five of these horses, and having the remainder returned at once. The horses I recommend to be retained

are Nos.—" and the numbers were given. That was a very startling admission under the hand of Major Studdert himself, because the five that he said should be returned were horses that he himself and his "vet." had passed. He enclosed in his letter an interesting document—a report as to each of the twenty-one horses. Of the five that he recommended should be retained four came from Collins and one from Fletcher. His report contained the following remarks with reference to particular horses—Lame; wicked; vicious; very thin; only four years old; thin; very thin; thin; lame all round, bad action; very thin. On the same day that he wrote that official letter he wrote a private letter to Colonel St. Quintin as follows:—" My Dear St. Quintin—I have sent you a formal report that I think you ought to act on. You will see that two of the horses whose numbers you gave me did not come from Ireland. One is an American, and the other is one that you said had a broken back and belongs to some English yeoman. Balfe, Grant's head man, was with me to-day. He is a good judge, and he says that if you saw the horses now that you cast you would not know them." After that what became of the suggestion that the horses were badly treated in Liverpool? The letter further said that Major Studdert could not send any better horses, and that it seemed hard to ask a man to take back a horse that he had put on board the boat sound. Counsel, in conclusion, said he relied on the following propositions of law:—That an agent or other person in a fiduciary position could not be allowed, either directly or indirectly, to make a secret profit at the expense of his principal; that in the relationship between agent and principal *uberrima fides* was required on the part of the agent; and that persons who made themselves parties to any arrangement the object of which was to enable an agent to obtain for himself or others a secret profit became liable to account in court.

Mr. Matheson read General Truman's report as follows:—" I inspected the horses belonging to the Imperial Yeomanry Committee at Liverpool on the 7th instant. There are in Lambeth Road Stables 128 horses purchased from Major Studdert, 14 of which I found fit for service. In Holmes's stables there are 40 horses, also purchased from Major Studdert, 9 of which I found fit for service. There are also 82 horses which for various reasons have not been sent out to South Africa; 34 of these I found suitable. Those which I cast I consider physically unfit for service and in dreadfully bad condition. Total horses, 250; cast, 193; fit for service, 57."

Mr. STAFFORD JACKSON, examined by Mr. Matheson, stated that he was a member of the Royal Veterinary College and practised in Liverpool. He was employed by the Yeomanry Committee to look after the horses that were brought to Liverpool. These horses were all under his care, and were visited every day either by himself or his assistant. The first lot of horses came on the evening of the 27th or the morning of the 28th February—214. On the 5th March 48 horses came from Waterford. They were shockingly poor and greatly emaciated; some had vermin on them, and some were suffering from strangles. He considered the whole lot useless. They were from five years old to anything.—(Laughter.) On the following day, as witness was walking on the quay at which horses were being shipped on board the " Monarch " steamer, he said " he wondered how many of them would land," at which Major Studdert, who was present, turned round and said that the horses "were sent to him to ship and not to criticise." Another consignment of 62 horses came from Dublin on the 6th of March.

What class of horses were they? They were of the same sort—they were, in my opinion, totally useless. Witness caused a communication to be made to the Committee, in consequence of which Colonel St. Quintin was sent down, and witness was with him all day on the 11th of March, when he went through the horses and rejected 21 as unfit for service. Were they unfit? Yes, very much; and a good many more, in my opinion. As to 41, he said they should do the best they could with them in order to get them into condition. On the 21st a lot of 112 horses came from Major Studdert. and another lot of 68 on the next day. Most of them were very much of the same sort as the others. A great many of them were suffering from parasitic mange and lice. There were 35 mares in foal. What he had said respecting age about the other horses applied to these also. During the time that the horses were under your care in Liverpool were they properly, fed, housed, and cleaned? Undoubtedly. When Colonel Gordon came down he rejected a great many more horses than Colonel St. Quintin had rejected, and they were properly rejected; and General Truman rejected a number more that the others had not rejected. They were all properly rejected.

To Mr. O'Shaughnessy.—The horses were kept loose in open pens—eight or nine in each pen.

To Mr. Matheson.—A lot of 60 came from Dublin on the 25th March. Their condition was much the same as that of the others. The horses kept in the pens and sheds were properly cared and fed.

JOHN BUGLER, examined by Mr. Matheson, deposed that he lived at Mount Shannon, and that he remembered selling a mare to Mr. Jack Studdert at Scariff for £19. His father had had the mare for nine or eleven years, and she was probably three or four years old when he bought her. His father paid £18 or £19 for her.

Cross-examined—He asked more than £19 for the mare. She was good value for it. He had used her for farmer's work.

JAMES MULLINS deposed that he lived with his father, who had a farm, and that he sold a horse to Major Studdert's man named O'Hartigan for £17. The height of the horse was measured in Major Studdert's presence, Witness got a cheque for the money in the office from clerk Collins. It was witness' grandfather that had bought the horse.—(Laughter.)

Mr. O'SHAUGHNESSY—Was this a very bad horse? No, he was a good mare and sound. He was galloped and examined. Witness had worked him up to the day he sold him.

Mr. FITZPATRICK, Lisdoonvarna, examined by Mr. Murphy—Do you know Mr. Jack Studdert? Partly.—(Laughter.) Witness said he came across him at Ennistymon Fair in March 1900. He (Fitzpatrick) had a mare there under a cart. Could not tell how old she was. Sold her to Mr. Studdert for £20. He had bought her a few months before for £6 : 10s.

To Mr. Bushe—There was nothing at all the matter with her.

THOMAS GARRY said that at a fair in Milltown, County Claer, on the 9th of March, he had a little chestnut mare under a cart. Sold her to Mr. Studdert for £8 : 10s., and got 2s. back for luck. Could not tell how old she was. He had bought her for £3 : 10s., and got back a penny for luck.—(Laughter.)

Was she an aged mare? She had a bit of age.

JOHN WILSON said that at the end of February 1900 he sold a horse to

Mr. Studdert for £15. In the previous October witness bought the horse, and "you could see right through the horse when I bought him." —(Laughter.)

When you were buying that piece of glass did you pay much for it? £6 : 7s. The horse was worth a great deal more than he got from Mr. Studdert.

WILLIAM GROGAN said he lived near Kilrush, and that he sold a horse to Mr. Tom Studdert on the 11th March for £15. Five years previously his (witness') father had paid seven guineas for the horse, which was then between six and seven years old.

PATRICK LYNCH, Killarney, deposed to having sold a mare to a gentleman who was buying horses for the war (Mr. Gregg). He got £12 for the mare. He had had her for ten or twelve years, and she was coming five years old when he bought her.

JOHN COUNAHAN, Killarney, some time in March 1900 sold a horse to Mr. Gregg for £17. Witness had paid £8 for the horse.

Mr. MAURICE LEONARD deposed that he sold the horse to Counahan. It was foaled in 1888. Witness sold it because it was subject to fits.

Mr. HENRY MEAGLE, Edgeware Road, London, shorthand clerk, deposed that he acted as shorthand writer for the Yeomanry Committee at their meeting on the 25th of May 1900, and took notes of the proceedings. He made a transcript which had been either mislaid or destroyed. Another transcript had since been made for him, which he revised.

The SOLICITOR-GENERAL read the transcript, from which it appeared that in reply to the Chairman (Lord Lonsdale) Major Studdert said in reference to the purchase of horses—"I assume that I was sent to pass them according to the best of my ability; if I thought them fit I think I considered my duty ended." Asked in what capacity he was buying, he answered—"Not a penny by way of speculation. I never bought a horse directly—not at the price I was ordered to give for them. I never got a penny for any horse, and I never was offered a penny except from one man, and I reported him to Colonel St Quintin. I bought twenty-four horses from this man, who tried to bribe my 'vet. I ask you the actual position—Are you agent, or in what capacity? I got wire and letter from him asking me to inspect horses, which I did. Asked how he had been able to take back twenty-one of the horses, he said that was a special thing. Are you quite sure they are the same horses that you bought? I marked them and I branded them. I am not a veterinary surgeon, and I did not examine them. Are you responsible for these horses or not? No. Kindly tell me who is? I inspected them, and I contend that the horses I bought—particularly the last 700—though some were thin ones, I thought they would get fat. Replying to the other questions, he said a particular lot of horses were taken back by consent; and that he did not assume any responsibility—he inspected the horses to the best of his ability. Asked what were his instructions to the dealers, his reply was—I ordered from few of these at all; I never ordered a horse from Widger. You acted for Colonel St Quintin in a private capacity? I do not know. You inspected? Colonel St Quintin asked—Will you do me a favour? Go and inspect horses, and I will give you £2 a-day and expenses. Are you an agent for this Committee? All I know is, Colonel St Quintin asked me as a favour. Do you consider yourself agent for this Committee, or do you not? I never gave any thought about it. I did it to oblige Colonel St. Quintin. I

did not ask it or want it. You may call me an agent or what you like. Replying to another question, Major Studdert said he repudiated responsibility. You contend that it was Colonel St. Quintin bought the horses? Yes. Did he communicate with the dealers directly? Yes. You are responsible for having passed a lot of useless devils, not worth a £5 note? Yes.

General TRUMAN, examined by Mr. Matheson, said he was Inspector-General of Remounts for the Army. On the 7th or 8th May 1900 he inspected the Irish horses in different stables in Liverpool. Mr. Jackson and Colonel Gordon were with him. What was the condition of the horses? They were small horses of from 14.2 to 15 hands high. Their condition I considered bad generally, and they were quite unfit for the service they were purchased for—that is, the service in South Africa. Out of 250 horses that I examined I rejected all but 57. There was nothing in the way the horses were housed to account for the condition in which I found them.

To The Macdermot—I could not say that the whole 250 were Irish horses. I read the report of Colonel Birbeck on the Irish horses that went to South Africa, in which it is stated that they did exceedingly well.

Asked what were the defects of the horses that he examined, the witness said they were not in condition for service, and the legs of some of them "brushed." He thought some of the horses were diseased—he did not count how many.

Mr. JOHN STUDDERT, one of the defendants, admitted that certain documents purporting to be signed by Patrick Collins were in his (Mr. Studdert's) handwriting; also that three cheques (produced) were endorsed by him.

Mr. THOMAS STUDDERT also admitted his handwriting to some documents.

This closed plaintiff's case.

On the Court resuming,

The SOLICITOR-GENERAL said—I have to inform your Lordship that this case has been terminated on the following terms:—All further proceedings in this action, save as follows, to be terminated: Judgment for the plaintiff against the defendants, C. W. Studdert, John Studdert, and Thomas Studdert, in the sum of £2000 in respect of the portion of the statement of claim claiming relief against the said defendant, C. W. Studdert, as agent and trustee, and in lieu of all accounts thereunder; and judgment against the said defendants—the same three—for costs measured at £1000 over the costs awarded by the House of Lords; the action to be dismissed as against the defendants Gregg and Fletcher, without costs.

VICE-CHANCELLOR—Have you a written consent yet, signed?

SOLICITOR-GENERAL—It is initialed by all the counsel.

Review.

DICTIONNAIRE VÉTÉRINAIRE. Par P. CAGNY ET H. J. GOBERT. Vol. I. (A.—H.) Paris: J. B. Baillière & Fils.

This is a handsome octavo volume with four coloured plates, and some 880 drawings. A second is to be published shortly, of the same size, and

will complete the work. This dictionary is intended by the editors to serve practical rather than theoretical purposes, and to supply practitioners with up-to-date knowledge of veterinary matters in as brief a form as is compatible with accuracy and completeness. In it the practitioner and student will find information on anatomy, physiology, medicine, surgery, hygiene, and veterinary jurisprudence; a good deal of space is also devoted to veterinary therapeutics. It may further be noted that great prominence is given to Pasteur methods, and it is evident that much care and industry has been displayed in the collection of information under this heading from all possible sources. The editors have succeeded in obtaining the collaboration of most of the distinguished French veterinary surgeons of the day, and they have laid the best and most recent veterinary publications under tribute. The plates and drawings are excellent, and help very greatly to the elucidation of the various problems that are treated of in the work. The price of the two volumes is moderate, being only 32 francs if ordered at once; later, 35 francs will be charged.

Notes and News.

Every one will rejoice to hear that Mr. A. C. Cope, chief veterinary officer to the Board of Agriculture, is rapidly regaining health and strength after the severe operation performed on him by Mr. Victor Horsley for a diseased bowel.

We saw Mr. Cope recently, and he jocularly remarked that the eminent surgeon had removed a swine-fever ulcer from him.

Obituary.

We regret to announce the sad death of Mr. Fred Wm. Hall, M.R.C.V.S., Enfield, who graduated from the New Veterinary College in 1894. Mr. Hall was driving on the afternoon of Saturday, the 21st of June, when his horse ran away. Mr. Hall was thrown out, and his skull fractured and his shoulder broken; he never recovered consciousness, and succumbed to his injuries on the following Monday.

We have also to record another sad fatality which occurred to Mr. T. H. Secker, M.R.C.V.S., Boroughbridge, on Monday, 21st July. It is supposed that Mr. Seeker had been compounding some medicine in his pharmacy when there was a sudden and violent explosion, which blew out the windows and wrecked the premises. Mr. Secker was found lying unconscious, his left arm having been blown right off, and he was suffering from other terrible injuries. He succumbed the same evening. Mr. Secker graduated from the New Veterinary College in 1885. He came of a well-known old family of veterinary surgeons.

XUM

CONTAGIOUS DISEASES ANIMALS ACTS, 1864 AND 1890.

SUMMARY OF RETURNS OF OUTBREAKS for the Five Weeks ending 19th July 1902.

ENGLAND AND WALES.

Swine Fever.	Anthrax.	Glanders (including Farcy).	Sheep-Scab (for month of June).
Outbreaks 191 Slaughtered 735	Outbreaks 39 Attacked 54	Outbreaks 132 Attacked 210	Outbreaks 23
SCOTLAND.			
Outbreaks 51 Slaughtered 294	Outbreaks 17 Attacked 25	Outbreaks 4 Attacked 6	Outbreaks 9
IRELAND.			
Outbreaks 19 Slaughtered 748	None.	Outbreaks 2 Attacked 6	Outbreaks 22

Communications, Books, Journals, &c., Received.

Agricultural Journal (Cape of Good Hope); Berliner Thierärztliche Wochenschrift; La Clinica Veterinaria (Milan); Deutsche Thierärztliche Wochenschrift; Tannoform in Veterinary Medicine (March); The Sanitary Journal; Scottish Medical and Surgical Journal; Veterinary Record; La Riforma Veterinaria; Le Mois Scientifique (Paris); L'Echo Vétérinaire (Liège); Annales de Médecine Vétérinaire (Brussels); Johns Hopkins Hospital Reports; Journal of Comparative Medicine and Veterinary Archives; Recueil de Médecine Vétérinaire; Gazette Médicale de Paris; Modern Medicine; Johns Hopkins Hospital Bulletin; Il Veterinario di Campagna (Moncalieri); Le Bulletin Vétérinaire (Orleans); Revista de Medicina Veterinaria (Bucarist); La Revista Veterinaria (Buenos Aires); Zeitschrift für Fleisch-und Milchhygiene (Berlin); Buletinul Societatii de Sciinte diu Bucuresci-Romania; The Meat Trades Journal; The Dental Record.

Owing to great pressure, we are unable to publish several important contributions.